

KARTA PRZEDMIOTU

Nazwa przedmiotu: English for material engineering (WTCNOCSI-EfME)

Nazwa w języku polskim:

Nazwa w jęz. angielskim: English for material engineers

Dane dotyczące przedmiotu:

Jednostka oferująca przedmiot: Wydział Nowych Technologii i Chemii

Przedmiot dla jednostki: Wydział Nowych Technologii i Chemii

Cykl dydaktyczny: Semestr letni 2024/2025

Koordynator przedmiotu cyklu: dr hab. Nouredine Bennis

Domyślny typ protokołu dla przedmiotu:

Zaliczenie na ocenę

Język wykładowy:

angielski

Skrócony opis:

This course is intended for student of material engineering. The subject has been chosen to include, description of specific materials emphasizing technical advantages, simplifying and illustrating technical explanation of material engineering. The focus in this syllabus is on skill development, fostering ideas and practice of language skills in various contexts of material engineering. The teaching effect of this course will give the student sufficient English vocabulary connected with structure properties and application of structural materials.

Opis:

SEMESTR IV

1. Material Science versus Material Engineering. Abbreviation for Academic purpose. English grammar selected for the material point of view. Grammar: Simple past versus present perfect
2. Characterization of Materials. Material properties. Phrases describing figures, diagrams and reading formulas.
3. Material technology. Describing specific materials. Categorizing materials. Specifying and describing properties
4. Material properties I. Tensile strength and deformation. Elasticity and plasticity. Stages in elastic and plastic deformation. Grammar: Comparison of adjectives
5. Material properties II. Hardness. Fatigue, fracture toughness and creep. Basic thermal properties.
6. Mechanical Material types. Metals and non-metals. Non-ferrous engineering metals. Mechanical properties of metals. Important properties for manufacturing. Metal alloys. Grammar: Adverbs I
7. Minerals and ceramics engineering materials. Word formation: Suffixes in verbs, nouns, and adjectives. Properties of ceramics. Case study: Optical Fibers versus Copper Cables. Adverbs II
8. Properties of Polymers. Natural and synthetic polymers. Thermoplastic and thermosetting plastics. Polymer processing. Word formation: The suffix-able/-ible. Grammar: Reported speech (Indirect Speech)
9. Advanced Materials. Semiconductors. Smart materials, nanotechnology. Grammar (Modal Auxiliar) and subordinate clauses

Literatura:

Podstawowa:

1. P. Domański, English in Science and Technology, WNT, 1993.
2. L. Szkutnik, An Introductory Course in Scientific English, PWN, 1978.
3. R. Macpherson, University English, Wydawnictwa Szkolne i Pedagogiczne, 1994.
4. E. B. Uvarov, A. Isaacs, Dictionary of Science, The Penguin, 1993.
5. David. W. A. Sharp, The Penguin Dictionary of Chemistry, 1991.

Uzupełniająca:

1. P. Atkins & J. de Paula, Physical Chemistry, Oxford University Press, 2005.

Efekty uczenia się:

Symbol / Efekty uczenia się / Odniesienie do efektów kierunku

- W1 / Student will have sufficient English vocabulary in the range of material structure, notions related to phase transformations. Student will be familiar with the way of describing structural parameters. / K_W03,
- W2 / Student will have basic English vocabulary connected with structure, properties and application of the structural materials. Student can write in English research reports about characteristic of various structural materials and their development trends. K_W13, K_W15
- W3 / Student will know the general chemical, mathematical and physical terminology necessary to translate papers related to scientific and technological issues / K_W02, K_W03, K_W04
- U1 / Student can collect data from literature, data bases and other information resources. Furthermore can analyze and interpret obtained information as well as formulate and justify opinion in the range of materials science./ K_U01, K_U03
- U2 / Student will have the ability to present scientific and technological issues both in written and oral way as well as to describe results of scientific research / K_U05
- U3 / Student will be able to prepare an oral presentation in English related to specific subject./ K_U04
- U4 / Student can present scientific and technological issues in the form of publications, lectures and conference appearances / K_U05
- K1 / Student can collaborate with a group and participate taking different roles. / K_K03

Metody i kryteria oceniania:

The subject is credited under condition of the positive results of the oral seminar presentation of a chosen problem in English within the range of electronics and its consequent preparation for publication in a scientific journal.

The final mark is the arithmetical average of the marks obtained for the two requirements mentioned above.

Accomplishment of the effects W1, W2, W3, W4, U3, U4, K1 is verified during the oral presentation and during formulation and preparation of the paper.

mark 2 – less than 50% of the required knowledge;

mark 3 – 50 ÷ 60% of the required knowledge;

mark 3,5 – 61 ÷ 70% of the required knowledge;

mark 4 – 71 ÷ 80% of the required knowledge;

mark 4,5 – 81 ÷ 90% of the required knowledge;

mark 5 – more than 91% of the required knowledge.

Mark 5 is given to a student who has acquired knowledge, skills and competencies contained in the teaching results system, is competent and consistent in the knowledge acquirement process.
Mark 4 is given to a student who has acquired knowledge, skills and competencies contained in the teaching results system on a good level.
Mark 3 is given to a student who has acquired knowledge, skills and competencies contained in the teaching results system on a satisfactory level.
Mark 2 is given to a student who has not acquired the basic knowledge, skills and competencies contained in the teaching results system and has not accomplished the necessary requirements.
Forma studiów
stacjonarne
Rodzaj studiów
I stopnia
Rodzaj przedmiotu
wybieralny
Przedmioty wprowadzające
Fizyka 1, 2 – general physics at basic level of a technical university Matematyka 1, 2, 3 – general mathematics at basic level of a technical university Język obcy – english within the range of secondary comprehensive school
Programy
kierunek: inżynieria materiałowa, specjalność: Inżynieria fotoniczna
Forma zajęć liczba godzin/rygor
C 30/+
Autor
dr hab. Nouredine BENNIS
Bilans ECTS
Lp. Aktywność Obciążenie w godz. 1. Udział w wykładach 2. Udział w laboratoriach 3. Udział w ćwiczeniach 30 4. Udział w seminariach 5. Samodzielne studiowanie tematyki wykładów 6. Samodzielne przygotowanie do laboratoriów 7. Samodzielne przygotowanie do ćwiczeń 48 8. Samodzielne przygotowanie do seminarium 9. Realizacja projektu 10. Udział w konsultacjach 8 11. Przygotowanie do egzaminu 12. Przygotowanie do zaliczenia 4 13. Udział w egzaminie godz.; ECTS Sumaryczne obciążenie pracą studenta: 90; 3,0 Zajęcia z udziałem nauczycieli: 1+2+3+4+9+10+13: 30; 1,0 Zajęcia powiązane z działalnością naukową: 60; 2,0
Dane dotyczące przedmiotu cyklu:
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Zaliczenie na ocenę