



dr hab. inż. Mateusz PASTERNAK, prof. WAT

Nazwa przedmiotu:

Writing and speaking on scientific English – level basic

English name:

Writing and speaking on scientific English – level basic

Code of the subject:

WELXXCXD-WaSoSE

Data concerning the subject:

Unit offering the subject:

Faculty of Advanced Technologies and Chemistry

Subject is addressed to:

Faculty of Electronics

Is valid from:

February 2017

The default protocol type for the course:

The subject is credited with a mark

Language of the course:

English

Short description:

1. Basic terminology of mathematics, physics and general chemistry.
2. Rudimental terminology of electronics and electronic materials
3. Chosen elements of conference English
4. Seminar multimedia presentation of a chosen problem within the field of electronics
5. Structural components of a paper on science and technology
6. Groundwork and grammar guides to writing a scientific paper
7. Realization of the paper intended for publishing in a scientific journal

Full description:

1. Fundamental mathematical operations: sum, difference, product and ratio of mathematical quantities. Reading of mathematical expressions. Notion of a function and types of functions. Differential and integral calculus. Exemplification of a differential and an integral. Elements of probability calculus and mathematical statistics. / 2h
2. Formulation of fundamental physical laws and principles having a direct link with electronics and electronic materials.
 - electromagnetic induction by Faraday, EMF production
 - basic electric quantities describing the process of current passage and relations between them
 - general properties of the elementary passive elements of an electric circuit (R,L,C)
 - general properties of the basic active elements of an electric circuit (semiconductor diodes and transistors)
 - elements of solid state physics. Solids' structure. Energy-band diagram. Conductors, semiconductors, insulators.
 - fundamentals of quantum mechanics. Structure of an atom. Periodic table of elements. Chemical bonds and molecules. / 6h
3. Rudimental English nomenclature applied in the electronic materials science / 2h
4. Conference English. Typical expressions. Examples of the conference appearances. Elaboration of the collection of typical expressions applied at a scientific conference (basing on the handout attachment) / 2h
5. Groundwork for an oral seminar presentation of a chosen scientific problem / 1h
6. Preliminary oral presentation of the topics designed for publications (supported by multimedia) - seminars / 10h
7. Introduction into preparation of a written form of a scientific presentation / 1h
8. Guides to structural components of a paper on science and technology / 1h
9. Remarks on grammatical structure of a paper / 1h
10. Formulation of a chosen scientific subject and preparation of its introductory version as a paper / 1h
11. Preparation of the final version of a paper for the publication in a scientific journal - discussion and final revision / 3h

TOTAL: 30 h

Bibliography:

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. W. Storr, *Basic Electronics Tutorials*, 2013
5. R. Miller, M. Miller, *Electricity and Electronics*, 2007
6. S. Gibilisco, *The Illustrated Dictionary of Electronics*, 2001

Effects of teaching:

- W1 Presents knowledge within the range of scientific and technical problems K_W01, K_W04
W2 Has the indispensable knowledge to formulate a detailed description of basic technical problems K- W03-4
W3 Knows the general chemical mathematical and physical terminology necessary to translate papers on scientific and technological issues K-W08-12
U1 Is able to formulate problems in English within the range of exact sciences K-U01, KU-05
U2 Has the ability to present scientific and technological issues both in written and oral way as well as to describe results of scientific research K-U02, K-U07
U3 Is able to make use of electronic and printed sources of scientific information K-U08-10
U4 Is able to present scientific and technological issues in the form of publications, lectures and conference appearances K-U05
K1 Properly recognizes and solves problems related to his/her profession K-K07

Methods and criteria of a student's knowledge evaluation:

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 i K3 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.

Internship:**Form of studies:**

stacjonarne

Type of studies:

III stopnia

Type of the subject:

obowiązkowy

Introductory subjects:

Mathematics, physics, electronics

Programs:

Electronics

Form of activities / number of hours/ requirements:							
Semester	x- examination, + credit, # project						ECTS
	total	lectures	exercises	laboratories	projects	seminars	
	30		20 / +			10 /+	
II							
30							
20 / +							
10 /+							
3 ECTS							
Author							
PhD, Eng. Wiesław Borys							
ECTS balance:							
SEM. I							
Ordinal no.:	Activity:					Load [hrs]:	ECTS:
1	Participation in lectures						
2	Individual studying the lecture assignment						
3	Participation in exercises					20	
4	Individual work on the preparation for exercises					14	
5	Participation in the laboratories						
6	Individual preparation for laboratories						
7	Participation in seminars					10	
8	Individual preparation for seminars					6	
9	Realization of the project						
10	Participation in consultations					12	
11	Preparation for examination						
12	Participation in examination						
Total student's workload						62	3 ECTS
Activities with the teacher: 1+3+5+7+9+10+12:						42	2 ECTS
Practical activities 5+6+9:							
Activities connected with scientific work 1+2+3+4+7+8:						50	2.5 ECTS

AUTOR
KARTY INFORMACYJNEJ

doc. dr inż. Wiesław BORYS

KIEROWNIK STUDIÓW DOKTORANCKICH

dr hab. inż. Mateusz PASTERNAK, prof. WAT

ZATWIERDZAM
DZIEKAN WYDZIAŁU ELEKTRONIKI

dr hab. inż. A. Dobrowolski, prof. WAT

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