STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Computer interfaces**		Code **1010311261010326896**
Field of study **Electrical engineering**	Profile of study (general academic, practical) **(brak)**	Year /Semester **3 / 6**
Elective path/specialty **-**	Subject offered in: **polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **First-cycle studies**	Form of study (full-time,part-time) **full-time**	
No. of hours Lecture: **1** Classes: **-** Laboratory: **1** Project/seminars: **-**		No. of credits **2**
Status of the course in the study program (Basic, major, other) **(brak)**	(university-wide, from another field) **(brak)**	
Education areas and fields of science and art **technical sciences** **Technical sciences**		ECTS distribution (number and %) **2 100%** **2 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	He knows the principles of operation and configuration of basic communication interfaces. He knows the hardware layer communication interfaces.
2	**Skills**	He can apply his knowledge in the field of electronics and information technology to the analysis of digital interfaces at the basic level. Put the program to configure parameters in order to establish data exchange.
3	**Social competencies**	He can think and act in an entrepreneurial manner in the area of ??operation and configuration interfaces.

Assumptions and objectives of the course:

Read the selected communication protocols and interfaces. Skills acquisition and implementation of selected interfaces.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Should be able to: describe the principles of operation of selected interfaces of hardware and software layers - [K_W16++, K_W17+,]
2. Should be able to: wybtranych parameters to configure communication protocols - [K_W16++, K_W17+,]
3. Should be able to: make optimal choices Interface communication depending on the application needs - [K_W16++, K_W17+,K_W15+]

Skills:

1. Will be able to: apply knowledge of computing and electronics in order to implement the selected interfeksu and data transfer protocol - [K_U21++, K_U12+]
2. Will be able to: apply the selected configuration of computer tools to support communication protocols and interfaces - [K_U13+, K_U21++]

Social competencies:

1. He can think and act in an entrepreneurial manner in the implementation of interfaces - [K_K02 ++]

Assessment methods of study outcomes

Lecture

? continuous evaluation for each course (rewarding activity and quality perception)

Laboratory:

? test and favoring knowledge necessary for the accomplishment of problems in the area of tasks in the laboratory,

? continuous evaluation, rewarding gain skills they met the principles and methods

? assess the knowledge and skills related to the implementation of laboratory exercises, the evaluation report made ??exercise.

Get extra points for the activity in the classroom, and in particular for:

? propose to discuss further aspects of the subject,

? the effectiveness of the application of the knowledge gained during solving the given problem,

? ability to work within a team performing a task specific practice in the laboratory.

Course description

Selected service interfaces in hardware and software. Familiar with the protocols of data transfer (eg, Internet protocols, protocols used in industrial automation). Types and construction of transmission media. Architecture and operation of different network structures. Sample implementations.

Basic bibliography:

1. W. MIelczarek - Uniwersalny interfejs szeregowy, Helion, 2005
2. J. F. Kurose, K. W. Ross - Sieci komputerowe. Ujęcie całościowe. Wydanie V, Helion, 2010
3. K. S. Siyan, T. Parker - TCP/IP. Księga eksperta. Wydanie II, Helion, 2002
4. U. Tietze, Ch. Schenk ? Układy półprzewodnikowe, WNT, W-wa 1996.

Additional bibliography:

1. A. Daniluk - RS 232C - praktyczne programowanie. Od Pascala i C++ do Delphi i Buildera, Helion, 2010
2. R. Chromik - RS232 w przykładach na PC i AVR, BTC, Legionowo 2010

Result of average student's workload

Activity	Time (working hours)
1. Lectures, laboratories, consulting	45
2. Laboratory classes, preparation for classes, reports	35

Student's workload

Source of workload	hours	ECTS
Total workload	45	2
Contact hours	35	1
Practical activities	15	1