STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Computer Science**		Code **1011101121011160390**

Field of study **Safety Engineering - Full-time studies - First-**	Profile of study (general academic, practical) **(brak)**	Year /Semester **1 / 2**

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				No. of credits
Lecture: **15** Classes: **-** Laboratory: **15** Project/seminars: **-**				**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	ECTS distribution (number and %)
technical sciences	**2 100%**
Technical sciences	**2 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student has knowledge of the subjects of Information Technology
2	**Skills**	Student can use previously learned applications
3	**Social competencies**	Student is active and willing to participate in the discussion on a given topic

Assumptions and objectives of the course:

The aim of the course is to prepare for using application programs. Acquiring the specification of useful information, implementation and operation of information systems

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

Knowledge:

1. Student knows the current trends and best practices in information technology - [K1A_W16]

2. Student knows the basic techniques and tools used to solve simple engineering tasks using information technology - [K1A_W25]

Skills:

1. Students can acquire, integrate, interpret information from literature, databases and other selected sources - [K1A_U01]

2. Student know how to use the theoretical knowledge to describe and analyse of the causes and processes and phenomena of social (cultural, political, legal, economic) and is able to formulate their own opinions, and choose the critical data and methods of analysis - [K1A_U02]

3. The student has the ability to self-learning and understands it - [K1A_U05]

4. Student is able to use information and communication technology for the tasks of typical engineering activities - [K1A_U07]

Social competencies:

1. Student understands the need and knows the possibilities of lifelong learning - [K1A_K01]

2. Student can work in team - [K1A_K02]

3. Student understands the need to provide information and opinions on the achievements of technology and other aspects of engineering - [K1A_K07]

Assessment methods of study outcomes
Formative assessment:
a) within the laboratory classes on the basis of using computer applications tests
b) within the lectures: on the basis of written assignments relating to the material covered during lectures.
Collective assessment:
a) within the laboratory classes: the average of marks given
b) within the lectures: the average of formative marks

Course description
The course covers the following topics - Lecture: Disciplines of computer sciences. The concept of the algorithm and calculation. Computer Architecture and the main trends of its development. Structured programming languages ??and notations algorithms. Introduction to object-oriented programming with the help of tools to quickly generate an application (Visual Basic). The layers of the operating system and network software. Issues of computer networks, TCP / IP and the Internet. Architecture of basic Internet services. New information technologies and data protection. Laboratory: The ability to work in Windows and using Internet services. Creating simple programs in Visual Basic.

Basic bibliography:

1. Stallings W., Organizacja i architektura systemu komputerowego, WNT, Warszawa, 2000

2. Harel D., Rzecz o istocie informatyki. Algorytmika, WNT, Warszawa, 2000

3. Strona internetowa z materiałami pomocniczymi do ćwiczeń laboratoryjnych

Additional bibliography:

1. Visual Basic. Podręcznik programisty dokumentacja Microsoft, lub inny podręcznik podstawowy

Result of average student's workload	
Activity	**Time (working hours)**
1. Participation in lectures	15
2. Participation in laboratory classes	15
3. Preparation for lectures tests	10
4. Preparation for laboratory classes	18
5. Discussion of exercises problems	2

Student's workload		
Source of workload	**hours**	**ECTS**
Total workload	60	2
Contact hours	32	2
Practical activities	15	1