STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Data bases	**1011101251010500460**

Field of study	Profile of study (general academic, practical)	Year /Semester
Safety Engineering - Full-time studies - First-	**(brak)**	**3 / 5**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**elective**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **15** Classes: **-** Laboratory: **30** Project/seminars: **-**	**6**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**6 100%**
Technical sciences	**6 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	There is no predecessors in First-cycle studies
2	**Skills**	Usage of Windows system, usage of web sites
3	**Social competencies**	Ability to formulate needs and to solve them. Group cooperation in preparing project

Assumptions and objectives of the course:

Acquainting students with selected technologies and standards in the area of developing databases. Practical learning in creation of simple databases

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

Knowledge:

1. 1. Student knows current trends and best practices in the area of information and computer science techniques, and supporting process of risk management. - [K1A_W16]
2. Student knows current trends and best practices in the area of information security and/or banking systems. - [K1A_W18]
3. Student knows and understand basic concepts in the area of authors law, information security and intellectual property security in free market economy. - [K1A_W34]

Skills:

1. Student can use information and communication techniques to make typical tasks in enginers activity. - [K1A_U07]
2. Student can plan and perform experiments, among the others mearusements and computer simulations, interpret obtained results and derive conclusions. - [K1A_U08]

Social competencies:

1. Student is aware of social role of the university of technology graduate, and especially understand need of formulating and communicate to society in specific.-[] - [K1A_K07]

Assessment methods of study outcomes

Forming grade:

a) in the area of laboratory as a written check,

b) in the area of lectures: as a written or oral check on the basis of previously presented matter,

c) in the area of design work on the basic of subsequent stages.

Summarizing grade:

a) in the area of laboratory average of grades,

b) in the area of lectures: written pass,

c) in the area of design work: final grade of the design work.

Course description

Introduction to databes concepts. Basic components of database architectures. General classifications of databases. Relation model of databases. Modelling of mental and implementation schematas. Entity relationship model. Transformation of entity-relationship model to relational model. Normalization: functional relations, normal forms. Basic physical structures: unorered files, ordered files, hash files. Basic indexes, secondery indexes, grouped indexes, multilevel indexes. Full SQL course.

Basic bibliography:

1. M. Lis SQL. Ćwiczenia praktyczne. Wydanie II, Helion, Gliwice 2011.

2. D. Mendrala, M. Szeliga Praktyczny kurs SQL. Wydanie II , Helion, Gliwice 2011.

Additional bibliography:

1. W. Dudek . Bazy danych SQL. Teoria i praktyka , Helion, Gliwice 2006.

2. L.Welling, L.Thomson "MySQL Podstawy. Wprowadzenie do korzystania z MySQL", Helion, Gliwice, 2005.

Result of average student's workload

Activity	Time (working hours)
1. Lectures presence	30
2. Laboratory presence	30
3. Design presence	15
4. Preparing laboratory activity	15
5. Preparing design activity	15
6. Preparing to written lectures pass	10
7. Lectures pass oral description	2
8. Preparation of laboratory reports	6

Student’s workload

Source of workload	hours	ECTS
Total workload	123	4
Contact hours	75	2
Practical activities	48	2