STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Computer Graphic**		Code **1010601221010620180**
Field of study **Transport**	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

Lecture: **-** Classes: **-** Laboratory: **2** Project/seminars: **-**	No. of credits **4**

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**	ECTS distribution (number and %**)** **4 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student has a basic knowledge in the field of engineering graphics. Student knows how to use Windows operating system and understands basic concepts associated with this working environment.
2	**Skills**	Student can use a computer and peripheral devices. Student can use gained knowledge to analyse particular practical problems and quickly make decisions. Student has good imagination and three-dimensional orientation.
3	**Social competencies**	Student can cooperate with the group. Student can define tasks and priorities of fulfilling them. Student shows independence in solving problems and gaining and perfecting acquired knowledge and skills.

Assumptions and objectives of the course:

The aim of the subject is to pass information about the rules of modern CAD systems? working and essential methods of three-dimensional modelling to students. Students acquire the knowledge about systems used to design automation and skills of proper designing of three-dimensional models and creating associated technical documentation.

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

Knowledge:

1. has the accurate knowledge about design tools used to solid models creations, parametrical modelling - [[K1A_W13]]

2. has the accurate knowledge about used operations, geometrical relations and proper constructional models projecting - [[K1A_W13]]

Skills:

1. is able to obtain information from the literature, internet, databases and other sources in Polish and English. Can integrate the information to interpret and learn from them, create and justify opinions - [[K1A_U01]]

2. is able to communicate using a variety of techniques in a professional environment and other environments using the formal record of the design, technical drawings, concepts and definitions in the scope of the study area - [[K1A_U02]]

3. is able to use the languages: native and international (English) at a level sufficient to enable understanding of technical texts and writing using dictionaries with technical descriptions of machines - [[K1A_U03]]

4. is able to prepare technical documentation of an engineering task - [[K1A_U04]]

5. has the ability to self-educate using modern teaching tools such as remote lectures, webpages and databases, educational software, electronic editions - [[K1A_U06]]

6. is able draw by hand machine elements and schematics in accordance with the principles of engineering drawing and European standards - [[K1A_U12]]

7. is able to assess the relevance and use the integrated tools for spatial modelling packages and interpret the results correctly - [[K1A_U13]]

Social competencies:

1. understands the need and knows the possibilities of lifelong learning, knows the need for acquiring new knowledge for professional development - [[K1A_K01]]

2. has a sense of responsibility for one?s own work and is willing to comply with the principles of teamwork and taking responsibility for collaborative tasks - [[K1A _K04]]

3. is able to define the tasks and priorities for their implementation for himself and the co-workers team - [[K1A _K05]]

4. is aware of the transfer of knowledge to society, takes steps to ensure that the information is understandable - [[K1A _K08]]

Assessment methods of study outcomes

Current grading of design tasks done. Summary ? credit

Course description

tools used to automation of designing and their characteristic features: operations, parametric solid models, associations in created documents, solid models? receptivity to being changed, sketching and applied operations, sketch?s geometry, sketch?s relations, sketch?s state, creation of parts, criteria of choosing initial profile, operations of addition and cutting, hole wizard, modifying operations, modelling of casts and forgings, using the mirror entities sketch tool, using the existing geometry to create sketched operations, duplicating the operations, operations of turning, using the integrated tool to perform a simple strength analysis, creation of shell elements, edition, fixing and changing existing projects, multiplying variations of parts, creation technical documentation, techniques of creating, analysis and using the assemblies

Basic bibliography:

1. Babiuch M.: SolidWorks 2006 w praktyce, Wydawnictwo Helion 2007

2. Babiuch M: SolidWorks 2009 PL. Ćwiczenia, Wydawnictwo Helion 2009

Additional bibliography:

1. www.solidworks.pl

2. SolidWorks? 2012 Podstawy SolidWorks, Dassault Systmes SolidWorks Corporation

Result of average student's workload

Activity	Time (working hours)
1. Preparation to the classes	40
2. Participation in classes (according to the plan)	30
3. Revision of the classes? content / report	10
4. Consultations	8
5. Preparation toexam / credit	10
6. Participation in the exam / credit	2

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	40	2
Practical activities	100	4