

Course code C.1. Course item

1. INFORMATION ABOUT THE COURSE

A. Basic information

Course title	<i>Computer Aided Design in Machine Building</i>
Field of study	<i>Computer Aided Engineering</i>
Cycle	<i>Second</i>
Study profile	<i>Academic</i>
Study mode	<i>Full-time</i>
Specialisation	<i>Not relevant</i>
Unit responsible for the field of study	<i>Faculty of Mechanical Engineering</i>
Lecturer	<i>Dr inż. Artur Cichański</i>
Introductory courses	<i>Computer graphics</i>
Prerequisites	<i>Basic knowledge of AutoCAD</i>

B. Semester/ weekly timetable

Semester	Lectures	Classes	Laboratories	Project classes	Seminars	Field experience	ECTS credits
II	-	-	30	-	-	-	2

LEARNING OUTCOMES (acc. to National Qualifications Framework)

No.	Description of learning outcomes	Reference to learning outcomes for the field of study	Reference to learning outcomes for the area of study
KNOWLEDGE			
K1	is familiar with software for 3D geometry modelling of construction elements and machines and creating documentation associated with 3D models	CAE_W03	T2A_W04, T2A_W05
SKILLS			
S1	is able to design geometric models of 3D objects and technical devices with the use of Autodesk Inventor software as an example of midrange CAD environment	CAE_U03	T2A_U02, T2A_U07, T2A_U19
S2	is able to evaluate usability of CAD system for specific tasks of geometry modelling	CAE_U05	T2A_U15, T2A_U18
SOCIAL COMPETENCES			
SC1	understands the need for life-long learning of CAD software	CAE_K01	T2A_K01

2. TEACHING METHODS

<i>laboratory classes</i>

2. METHODS OF EXAMINATION

<i>written exam</i>

3. COURSE CONTENT

Laboratories	Project managing. Viewing models. Drawing sketches for solid models. Adding geometrical and dimension constraints to sketches.. Methods of part modelling. Viewing models in 3D space. Working with sketched features. Creating and editing placed features. Parameterisation of sketches and features. Creating and editing work features: points, axes, planes. Assembly modelling. Placing and constraining assembly components. Creating and formatting drawing. Using drawing resources: frames, borders. Creating views in drawings. Annotating drawings. Sheet metal part modelling. Frame generation. Creating features of plastic parts.
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4. VALIDATION OF LEARNING OUTCOMES

(Each learning outcome from the list requires validation methods to ensure that it was achieved by a student.)

Learning outcome	Form of assessment (for example:)					
	Oral examination	Written examination	Colloquium	Project	Report
K1		x				
S1		x				
S2		x				
SC1		x				
...						

5. LITERATURE

Basic literature	Tickoo S., Autodesk Inventor 2013 for Designers, Kindle Edition
Supplementary literature	Autodesk Inventor Tutorial, http://wikiphelp.autodesk.com/Inventor/enu/2013

6. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity	Student workload– number of hours (for example:)
Participation in laboratories indicated in point 2.2	30
Preparation for laboratories	15
Reading assignments	5
Other (preparation for exams, tests, carrying out a project etc)	10
Total student workload	60
Number of ECTS credits allocated by the lecturer	2
Final number of ECTS credits (determined by the Programme	2

Załącznik nr 3 do wytycznych dla rad podstawowych jednostek organizacyjnych do tworzenia nowych i weryfikacji istniejących programów studiów I i II stopnia w UTP w Bydgoszczy

Council for the Field of Study)	
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