POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Product Data Management systems 1

Course

Field of study	Year/Semester
Product Lifecycle Engineering	1/1
Area of study (specialization)	Profile of study
	general academic
Level of study	Course offered in
Second-cycle studies	English
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
10	10	
Tutorials	Projects/seminars	
	10	

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

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Wydział Inżynierii Mechanicznej

ul. Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

The student starting this subject should have a basic knowledge of the basics of information technologies, databases, product life cycle management. He should also be able to obtain information from specified sources and be willing to cooperate as part of a team.

Course objective

Providing students with basic knowledge of methods, tools and systems supporting the creation, collection, management and sharing of data on the product (its structure), its documentation and its production processes, together with the possibility of processing in the database. Developing students' ability to solve problems that arise when managing product data.

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Course-related learning outcomes

Knowledge

1. The student has detailed knowledge about the assumptions, functionality (features and functions) and benefits of using PDM systems in the work of an engineer.

2. Student has knowledge about project documentation management (including technical data about the product) in PDM systems.

Skills

1. The student has the ability to create projects, compile elements, assemblies, parts and documents related to the product (its development) in all stages of its life (from the concept stage to withdrawal from use).

2. Student is able to effectively review all relevant data on projects related to the analyzed product.

3. Student is able to indicate the state of changes of a given PDM object (version-revision-variant), prepare product parts lists in all commonly used forms (eg structural list, modular list, quantitative list of parts).

Social competences

1. The student understands that knowledge and skills related to the operation of PDM systems have an impact on the effective work of project teams in the enterprise.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired during the lecture is verified by a 45-minute colloquium at the last lecture. The test consists of 10-15 questions (test and open), variously scored. Passing threshold: 50% of points. Final issues on the basis of which questions are prepared will be sent to students by e-mail using the university e-mail system.

Skills acquired as part of the laboratory classes are verified on the basis of the instructions carried out in the PDM system, the progress of which is assessed on an ongoing basis during the semester.

Programme content

Lectures

1. PDM systems - assumptions, features, functions, construction.

2. PDM systems - engineering applications in product data management.

3. PDM and PLM

4. Requirements for PDM systems in various industry areas.

5. Integration of PDM - Cax and PDM - ERP - Case studies

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Laboratories:

1. PDM systems - practical introduction (interface, program functions).

2. Creating projects, compiling elements, assemblies, parts and documents related to the product (its development).

3. Integration with the CAx environment - part 1.

4. Integration with the CAx environment - part 2.

5. Preparation of the final report.

Project:

1. Management of PDM-CAx project documentation - part 1.

2. Management of PDM-CAx project documentation - part 2.

3. Preparation of CAD 3D data for the project in the PDM system - part 1.

4. Preparation of CAD 3D data for the project in the PDM system - part 2.

5. Implementation of the project in the PDM system.

Teaching methods

1. Lecture: multimedia presentation, illustrated with examples of projects implemented in the PDM system.

2. Laboratory exercises: performance of tasks given by the teacher - practical exercises in accordance with the prepared instruction for classes.

3. Project: performance of tasks given by the teacher.

Bibliography

Basic

1. Port S., MacKrell J., PDM Case Studies: User Experiences with PDM Systems, CIMdata, Incorporated, 1996

2. Kals H., van Houten F., Integration of Process Knowledge into Design Support Systems, Proceedings of the 99 CIRP Design Seminar, 1999

3. Crnkovic I., Asklund U., Implementing and Integrating Product Data Management and Software Configuration Management, Artech House 2003

Additional

1. Documentation of the ENOVIA SMARTEAM PDM system

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Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	20	1,0

[1] delete or add other activities as appropriate