STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Computer aided manufacturing**			Code **1011102311011115175**
Field of study **Logistics - Full-time studies - Second-cycle**		Profile of study (general academic, practical) **general academic**	Year /Semester **1 / 1**
Elective path/specialty **Corporate Logistics**		Subject offered in: **Polish**	Course (compulsory, elective) **elective**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **full-time**		
No. of hours Lecture: **30** Classes: **-** Laboratory: **-** Project/seminars: **30**			No. of credits **5**
Status of the course in the study program (Basic, major, other) **other**	(university-wide, from another field) **university-wide**		
Education areas and fields of science and art **technical sciences** **Technical sciences**			ECTS distribution (number and %) **5 100%** **5 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Has knowledge of the subject Production Management
2	**Skills**	The student has the skills of the subject Production Management
3	**Social competencies**	The student has the social competence of the subject Production Management

Assumptions and objectives of the course:

The student mastering knowledge, skills and social competence related to the design of modern production systems and their computer-aided

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

Knowledge:

1. Can to characterize according to the ruling in the area and their relationship with the logistics - [K2A_W02]
2. Knows the basic relationship between the sphere of technical and economic in the area of logistics - [K2A_W04]
3. Has a profound knowledge of manufacturing engineering and its links with the direction of logistics - [K2A_W05]
4. Knows the basic concepts characteristics for the logistics - [K2A_W09]
5. Knows the systems and their functionality used in logistics and related areas - [K2A_W12]
6. Can to explain in detail the methods, tools, techniques specific to the logistics - [K2A_W13]

Skills:

1. Can to communicate using of appropriate in a professional environment as well as in other environments - [K2A_U02]
2. Can to prepare and present in Polish of foreign discuss the problem located within the subject - [K2A_U04]
3. Can to realize a process selfeducation - [K2A_U05]
4. Can to formulate and solve problems through interdisciplinary integration of knowledge in the Fields and disciplines used to design logistics systems - [K2A_U10]
5. Can to assess the usefulness and ability to use New techniques and technologise, in terms of logistics and related functional areas - [K2A_U12]
6. Can to identify possibile improvements in the reporting of logistics system - [K2A_U16]

Social competencies:

1. The student is aware of the responsibility for own work and is ready to obey the rules work in a team and to take responsibility for jointly implemented tasks - [K2A_K03]

2. The student is able to see the cause and effect in the implementation of its goals and carry out gradation significance of alternative or competing tasks - [K2A_K04]

Assessment methods of study outcomes

Forming Rating:

a)project- based discussion on solutions that wants to propose the project

b)a lecture on the basis of answers to questions about the material discussed in the previous lecture

Summary Rating:

in terms of the project a) on the basis of a public presentation of the project results and discussions on them, b) on the basis of the substantive quality of the project prepared

in terms of a lecture on the basis of a public presentation on a given topic and answer questions concerning the material discussed in the lecture

Course description

The lecture begins with an explanation of "computer-integrated manufacturing." Discussed are the basic modules of CIM - CAD (computer-aided design, CAPP (computer-aided design technology), CAM (computer aided manufacturing), PPC (production planning), CAQ (computer-aided quality management). The are variants of the individual modules and their possible configurations. presented is the process of implementation of CIM. In some cases discussed are difficulties associated with this process.

In class, students prepare project design assumptions for the implementation of CIM in the selected company.

Teaching methods: conventional specialist lecture, laboratory exercises using a CAD system, team project of a selected module, work with literature

Basic bibliography:

1. Knosala M., (red.) Komputerowo zintegrowane zarządzanie WNT Warszawa 2007

2. Fertsch M., Grzybowska K., Stachowiak A., (2007), Standard CALS/OASIS-geneza, podstawy teoretyczne i stan obecny, [w:] Fertsch M., Grzybowska K., Stachowiak (red.), Logistyka i zarządzanie produkcją-nowe wyzwania, odległe granice, monografia wydana przez Instytut Inżynierii Zarządzania, Politechnika Poznańska 2007

3. Fertsch M., Grzybowska K., Stachowiak A., (2008), Modele systemów produkcyjnych i logistycznych-próba klasyfikacji, [w:] Fertsch M., Grzybowska K., Stachowiak (red.), Logistyka i zarządzanie produkcją: narzędzia, techniki, metody, modele, systemy, monografia wydana przez Instytut Inżynierii Zarządzania, Politechnika Poznańska 2008

4. Golinska P., Fertsch M., Gomez J.M., Oleskow J., (2007), The Concept of Closed-loop Supply Chain Integration Through Agent-based System., [in:] Gomez J.M., Sonnenschein M., Muller M., Welch H., Rautenschrauch C., (eds.), Information Techniologies in Environmental Engineering, Springer Verlag, Berlin Heidelberg, 2007

Additional bibliography:

1. Brzeziński M., Organizacja i sterowanie produkcją. Projektowanie systemów produkcyjnych i procesów sterowania produkcją, Agencja Wydawnicza Placet, Warszawa 2002.

2. Senger Z., Sterowanie przepływem produkcji, Wydawnictwo Politechniki Poznańskiej, Poznań, 1998

Result of average student's workload

Activity	Time (working hours)
1. lectures	30
2. project	30
3. consultations	30
4. Home work	35

Student’s workload

Source of workload	hours	ECTS
Total workload	125	5
Contact hours	85	3
Practical activities	55	2