Study program : Mechanical Engineering, Module Industrial Engineering

Type and level of studies: MSC

Course unit: Computer Integrated Manufacturing (CIM systems)

Teacher in charge : Miladin Stefanovic

Language of instruction: English

ECTS: 6

Prerequisites: no

Semester: *Winter semester*

Course unit objective: Presentation of core of computer and management of production beginning with computer
supported design, to the integration of production systems, quality and management system.

Learning outcomes of Course unit

Understanding and basic knowledge and skills in the field of computer integrated production, beginning at design, production and manufacturing systems to systems integration.

Course unit contents

Theoretical classes

In the framework of theoretical study following areas will be discussed: introduction to the CIM, CIM systems and models, the basic elements IS, automated systems identification and data collecting, systems for the exchange of data, computer supported designed, planning and production, computer-controlled production technology, quality control, integration systems and methods, Management of CIM technologies.

Practical classes

Exercises and work in laboratories. (CIM work with models, as well as with the DNC software and CNC machine, where will learn programming code G). In the framework of study research work, students will be trained for basic research in the field of cases.

Literature

[1] K. Asai, (Editor), et al Edition "Manufacturing, Automation Systems and CIM Factories," Springer, ISBN: 0412482304

[2] James A. Rehg "Introduction to Robotics in CIM Systems" (5th Edition) ", Prentice Hall, 5 edition (March 8, 2002), ISBN 0130602434

[3] Groover, M. P. (2007). Automation, production systems, and computer-integrated manufacturing. Prentice Hall Press.

Number of active teaching hours				**Other classes 1**
Lectures: 3	Practice: 1,6	Other forms of classes:0,4	Independent work:0	

Teaching methods

Classical, frontal lecturing, combined with individual and group approach using modern education equipment. Evaluation of knowledge: tests and seminars.

Examination methods (maximum 100 points)

Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**
Student's activity during lectures		oral examination	**30**
practical classes/tests	**30**	written examination	
Seminars/homework	**20**	.....	
Project	**20**		
Other			

Grading system

Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**≤50**	Failing