UNIVERSITY OF PANNONIA

COURSE DATASHEET

Semester:	2016/17/1
Course:	CNC technology and programing II
Code:	VEMKGEB552D
Responsible department:	Institute of Mechanical Engineering
Department code:	MKGEI
Responsible instructor:	dr. Imre Timár

Course objectives:

Introduction to the CNC machines and technologies, introduction to the basic programming.

Course content:

Introduction to the Jewel Smith CAD-CAM programing system. Basic geometrical commands.
Introduction to the Jewel Smith CAD-CAM programing system. Different geometrical transformations.
Introduction to the Jewel Smith CAD-CAM programing system. Generating a relief.
Introduction to the Jewel Smith CAD-CAM programing system. Tool set up, simulation of tool movement.
Introduction to the Jewel Smith CAD-CAM programing system. Machining of a relief.
Introduction to use the NCT CNC machine. Control display, tastature.
Introduction to use the NCT CNC machine.. Munkadarabbefogók kezelése. Szerszámok befogása. Szegnyereg mozgatása. Főorsó mozgatása.
Introduction to use the NCT CNC machine.. Munkatér és védelme. Biztonsági elemek. Mozgatás szabályai, végrehajtása. Az üzemmód kiválasztása. Beállítások.
Introduction to use the NCT CNC machine. Rules for the programming. Editing keyboard. Editing process.
Introduction to use the NCT CNC machine. Parameters of the control. The rules of the graphic control. The rules of the simulation. Execution of the control.
Introduction to use the NCT CNC machine. Rules for the automatic operation. Manufacturing of the part. Rules for the program stop and re-start. Methods to set up the exact dimensions. (corrections)
NCT megmunkáló központ megismerése. Methods to set up the null points. Determination of the null point shift. Handling of the null point data storage. Control of the null points.
Introduction to use the NCT CNC machine. Mothods for the determination of the tool corrections. Tool measurement. Handling of the tool correction data storage. Control of the tool measurement. Wear correction data storage.
Introduction to use the NCT CNC machine.. Ciklusok alkalmazásának szerepe a CNC-esztergagépeken. Hossznagyoló ciklusok. Siknagyoló ciklusok. Kontúrpárhuzamos-nagyoló ciklusok. Menetesztergáló ciklusok. Fúró ciklusok. Beszúró ciklusok. Simító ciklus.
Introduction to use the NCT CNC machine. Application of the subrutines. Application of the subrutines. Management of the subrutines. Rotation. Mirroring. Scaling. Modification of the tool correction from the program.

Requirements, evaluation and grading:

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Requirements, evaluation and grading:

"At least grade 2 midterm examination.
The whole content of lectures is included in the written examination.
Grading is based on a written final examination.
The final mark is determined according to reached points:
points final mark
above 80 excellent (5)
70-79 good (4)
60-69 medium (3)
50-59 pass (2)
below 50 fail (1)"

Required and recommended readings:

Boza Pál: CNC-technológia és -programozás, Jegyzet, 2008
Céh Mihály: CNC-programozás alapjai, Műszaki Kiadó Budapest, 2008