

## INFORMAČNÝ LIST PREDMETU

<b>Vysoká škola:</b> Trenčianska univerzita Alexandra Dubčeka v Trenčíne	
<b>Fakulta:</b> Fakulta špeciálnej techniky	
<b>Kód predmetu:</b> KSTM/3-71/d/16	<b>Názov predmetu:</b> CNC Programming
<b>Druh, rozsah a metóda vzdelávacích činností:</b> <b>Forma výučby:</b> Prednáška / Cvičenie / Laboratórne cvičenie <b>Odporúčaný rozsah výučby ( v hodinách ):</b> <b>Týždenný:</b> 0 / 0 / 2 <b>Za obdobie štúdia:</b> 0 / 0 / 24 <b>Metóda štúdia:</b> prezenčná	
<b>Počet kreditov:</b> 6	
<b>Odporúčaný semester/trimester štúdia:</b>	
<b>Stupeň štúdia:</b> N	
<b>Podmieňujúce predmety:</b>	
<b>Podmienky na absolvovanie predmetu:</b> 90% attendance at lectures, 100% attendance at laboratory exercises (max. With 2 excused absences), individual work for absence at lectures and laboratory exercises, demonstration of knowledge of the content of the subject in written and oral exam during the trial period. Final testing in the form of 3D modeling and process of simulations with generating of CNC code of selected components. Of the total number of 100% points, at least (E) - 55%, (D) - 65%, (C) / 75%, (B) - 85%, (A) - 95%	
<b>Výsledky vzdelávania:</b> Students will acquire the theoretical and practical knowledge and skills of CNC control systems programming and operation of CNC machine tools as well as automation of technological processes of machining. They acquire theoretical and practical knowledge of the creation, of all methods and levels of programming of the machining processes realized on CNC machine tools with software analysis and graphic support of the control systems FANUC NC GUIDE PRO (Turning, Milling applications) and HEIDENHAIN iTNC530 respectively.	
<b>Stručná osnova predmetu:</b> CNC control systems in the engineering industry and in the machining process. Methods of programming CNC control systems. Programming and operation of CNC machine tools. Operating modes of CNC machines. Coordinate systems of CNC machines. Tool corrections. Machine M - Functions and Preparatory G - Codes. Programming cycles. Postprocessors and CNC program generation in ISO format. Practical creation of programs with analytical and graphic support of FANUC NC GUIDE PRO (Turning, Milling), HEIDENHAIN iTNC530 (3D Milling). Practical operation of CNC machining panels.	
<b>Odporúčaná literatúra:</b> [1] GE FANUC AUTOMATION CNC: MANUAL GUIDE i – Milling, 2007, 125 pages, -1.st edit. GE Fanuc Automation CNC Europe S.A. Echternach, Luxembourg. [2] QUESADA, R.: Computer Numerical Control – Machining and Turning Centers, 2005, Pearson Education Ins., Upper Saddle River, New Jersey, Columbus, Ohio, 548 pages., ISBN 0-13-048867-4. [3] SMID, P.: CNC Programming Hanbook. Second Edition. 2003. Industrial Press Inc. 497 pages. ISBN 0-8311-3158-6.	

<b>Jazyk, ktorého znalosť je potrebná na absolvovanie predmetu:</b> english					
<b>Poznámky:</b> The subject is provided to Erasmus students. The subject is selective.					
<b>Hodnotenie predmetov</b> Celkový počet hodnotených študentov: 21					
A	B	C	D	E	Fx
85.71	14.29	0.0	0.0	0.0	0.0
<b>Vyučujúci:</b> doc. Ing. Jozef Majerík, PhD.					
<b>Dátum poslednej zmeny:</b> 27.09.2022					
<b>Schválil:</b>					