

## INFORMAČNÝ LIST PREDMETU

<b>Vysoká škola:</b> Trenčianska univerzita Alexandra Dubčeka v Trenčíne	
<b>Fakulta:</b> Fakulta špeciálnej techniky	
<b>Kód predmetu:</b> KSTM/3-70/I/d/17	<b>Názov predmetu:</b> CAE Systems in Production Process I
<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> 100% participation in laboratory exercises, completion of set tasks (max. 2 excused absences), individual work for non-participation in seminars, passing a credit test in the form of modeling based on given examples, successful completion of at least 60% of total points. Final evaluation: Final testing in the form of 3D modeling 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> The student will acquire theoretical and practical knowledge and skills from programming of CNC machine control systems and CNC machine tools as well as automation of technological machining processes with computer support of CAD / CAM system CATIA V5. Gain theoretical and practical knowledge of creation, all ways and levels of programming of machining processes realized on CNC machine tools with software analytical-graphic support control systems FANUC NC GUIDE PRO (Turning, Milling applications), HEIDENHAIN iTNC530 and CAD / CAM system CATIA V5 NC MANUFACTURING (Turning, Milling, Drilling applications).	
<b>Stručná osnova predmetu:</b> CNC control systems in mechanical engineering. CAD / CAM systems in the technological process of machining. Programming methods of CNC control systems. Programming and operation of CNC machine tools. Operating modes of CNC machines. Coordinate systems of CNC machines. Tool corrections. Machine functions and prep codes. Programming cycles. Postprocessors and program generation in ISO format. Practical programming with FANUC NC GUIDE PRO (Turning, Milling), HEIDENHAIN iTNC530 (3D Milling) and CATIA V5 NC MANUFACTURING (Turning, Milling, Drilling applications) systems.	
<b>Odporúčaná literatúra:</b> [1] GE FANUC AUTOMATION CNC: MANUAL GUIDE i – Turning, 2007, 125 strán, - 1.st edit. GE fanuc Automation CNC Europe S.A. Echternach, Luxembourg. [2] GE FANUC AUTOMATION CNC: MANUAL GUIDE i – Milling, 2007, 125 strán, - 1.st edit. GE fanuc Automation CNC Europe S.A. Echternach, Luxembourg. [3] TECHNOCENTRUM CAD – Turning and Milling applications of CATIA V5 NC Manufacturing, 530 strán, 2007, TC CAD Liberec, Czech Republic.	

[4] 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.

**Jazyk, ktorého znalosť je potrebná na absolvovanie predmetu:**

English

**Poznámky:**

The subject is provided to Erasmus students. The subject is selective.

**Hodnotenie predmetov**

Celkový počet hodnotených študentov: 6

A	B	C	D	E	Fx
100.0	0.0	0.0	0.0	0.0	0.0

**Vyučujúci:** doc. Ing. Jozef Majerík, PhD.

**Dátum poslednej zmeny:** 27.09.2022

**Schválil:**