# Information sheet for the course
# Designing production processes

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| **University:** *Alexander Dubček University of Trenčín* | |
| **Faculty:** *Faculty of special technology* | |
| **Course unit code:** *ŠST/I/3-51/d* | **Course unit title:** *Designing production processes* |
| **Type of course unit:** *compulsory* | |
| **Planned types, learning activities and teaching methods:** | |
| *Type of course: Lecture / Seminar / Laboratory exercise. Recommended extent of course (in hours): 2/0/1 face to face* | |
| **Number of credits:** *4* | |
| **Recommended semester:** *2nd semester in the 1st year (full-time)* / *2nd semester in the 1st year (part-time)* | |
| **Degree of study:** *II. (engineer)* | |
| **Course prerequisites:** *ŠST / B / 4-55 /d Computer Aided Design I* | |
| **Assessment methods:** | |
| *100% participation in laboratory exercises (without no-show), transfer semestral project min. 50% attendance at lectures, demonstrate knowledge of subject content in written, practical and oral examination.* | |
| **Learning outcomes of the course unit:** | |
| *The student will acquire theoretical and practical knowledge of programming CNC machine control systems and automation of manufacturing processes with computer-aided CAD / CAM CATIA V5. Obtained theoretical and practical knowledge of creation and of all levels of programming and production processes and time trials with the software production process analytical graphical support systems FANUC NC GUIDE FOR (Turning, Milling), HEIDENHAIN iTNC530 and CATIA V5R20 NC MANUFACTURING (Turning, Milling).* | |
| **Course contents:** | |
| *The manufacturing process and its breakdown. Production management and its breakdown. Overall production preparation. Technological preparation of production. CNC control systems in mechanical engineering. CAD / CAM systems in the production process. Methods for programming CNC machines. Introduction to Programming CNC production systems at the workshop, and plant operation. Application creation of technological processes and temporal study of the production process with software analytical and graphical support systems FANUC ISO GUIDE FOR FANUC NC (Turning, Milling), HEIDENHAIN iTNC530 (3D Milling) and CATIA V5R20 NC MANUFACTURING (Turning, Milling).* | |
| **Recommended of required reading:** | |
| *ŠTULPA, M.: CNC obráběcí stroje a jejich programování. BEN Praha 2006, ISBN 978-80-7300-207-7* | |
| *MAJERÍK, J., ŠANDORA, J.: Nové progresívne nástroje a metódy technológie obrábania. FŠT TnUAD Trenčín 2012, ISBN 978-80-8075-515-7, EAN 9788080755 157.* | |
| *GE FANUC AUTOMATION CNC: MANUAL GUIDE i - Milling, 2007, 125 strán, -1.st edit. GE fanuc Automation CNC Europe S.A. Echternach, Luxembourg.* | |
| *TECHNOCENTRUM CAD - Turning and Milling applications of CATIA V5 NC Manufacturing, 530 strán, 2007, TC CAD Liberec, Czech Republic.* | |
| *JANDEČKA, K.: Postprocesory a programování CNC strojů. FTVM Brno. ISBN978-80-7044-870-0* | |
| **Language:** *Slovak, English* | |
| **Remarks:** | |
| **Evaluation history:** | |
| *Total number of students being evaluated:* | |

| A | B | C | D | E | FX |
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| 23,81 | 19,05 | 34,52 | 16,67 | 2,38 | 3,57 |

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| **Lecturers:** *doc. Ing. Harold Mäsiar, CSc. - lecturer* | |

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| *Ing. Jozef Majerík, PhD. - instructor* |
| **Last modification:** *15.4..2014* |
| **Supervisor:** *prof. Ing. Jiří Balla, CSc., guarantee of the study program "Special Mechanical Engineering Technology".* |