Course description

Department/Unit /	KTO / SPNC			**Academic Year**	2023/2024
Title	Seminar project from NC mach. program.			**Type of completion**	Pre-Exam Credit
Long Title	Seminar project from NC machine programming				
Accredited/Credits	Yes, 6 Cred.			**Type of completion**	Combined
Number of hours	Seminar 6 [Hours/Week]				
Occ/max	Status A	Status B	Status C	**Course credit prior to**	NO
Summer semester	0 / -	0 / -	0 / -	**Counted into average**	NO
Winter semester	2 / -	0 / -	0 / -	**Min. (B+C) students**	5
Timetable	Yes			**Repeated registration**	NO
Language of instruction	Czech			**Semester taught**	Winter semester
Optional course	Yes			**Internship duration**	0
Evaluation scale	S|N				
No. of hours of on-premise					
Auto acc. of credit	Yes in the case of a previous evaluation 4 nebo nic.				
Periodicity	K				
Substituted course	None				
Preclusive courses	N/A				
Prerequisite courses	N/A				
Informally recommended courses	N/A				
Courses depending on this Course	N/A				

Course objectives:

The aim of the subject is to teach students to solve specific assignment of practical technical problem into the form of technical documentation, taking into account the external factors that influence the solution of the problem.

Requirements on student

- regular consultations of the seminar project during the semester
- presentation of the seminar project
- pass the seminar project

Content

- assignment of a seminar project
- analysis of a problem
- proposal of a solution
- analysis of external conditions affecting the solution of the problem
- evaluation and conclusion

Fields of study

Guarantors and lecturers

- **Guarantors:** Ing. Jan Hnátík, Ph.D. (100%)
- **Seminar lecturer:** Ing. Jan Hnátík, Ph.D. (100%)

Literature

- **Basic:** Štulpa, Miloslav. *CNC : programování obráběcích strojů*. První vydání. 2015. ISBN 978-80-247-5269-3.
- **Recommended:** Dillinger, Josef. *Moderní strojírenství pro školu i praxi*. Vyd. 1. Praha : Europa-Sobotáles, 2007. ISBN 978-80-86706-19-1.
- **Recommended:** Vrabec, M., Mádl, J. *NC programování v obrábění*. Praha, ČVUT, 2004. ISBN 80-01-03045-8.
- **Recommended:** Schmid, Dietmar. *Řízení a regulace pro strojírenství a mechatroniku*. Vyd. 1. Praha : Europa-Sobotáles, 2005. ISBN 80-86706-10-9.

Time requirements

All forms of study

Activities	Time requirements for activity [h]
Individual project (40)	40
Practical training (number of hours)	100
Presentation preparation (report) (1-10)	10
Total:	**150**

assessment methods

Knowledge - knowledge achieved by taking this course are verified by the following means:

Skills demonstration during practicum

Seminar work

Individual presentation at a seminar

Skills - skills achieved by taking this course are verified by the following means:

Seminar work

Skills demonstration during practicum

Individual presentation at a seminar

Competences - competence achieved by taking this course are verified by the following means:

Seminar work

prerequisite

Knowledge - students are expected to possess the following knowledge before the course commences to finish it successfully:

- explain basic programming methods of NC program design

- describe basic technology methods of machining

- describe the basic methods of quality management

Skills - students are expected to possess the following skills before the course commences to finish it successfully:

- create NC program for selected NC machine tool type and control system

- assemble the production plan

Competences - students are expected to possess the following competences before the course commences to finish it successfully:

N/A

N/A

N/A

teaching methods

Knowledge - the following training methods are used to achieve the required knowledge:

Task-based study method

Seminar classes

Field trip

Skills - the following training methods are used to achieve the required skills:

Individual study

Seminar

Field trip

Competences - the following training methods are used to achieve the required competences:

Seminar

Field trip

learning outcomes

Knowledge - knowledge resulting from the course:

- to solve a problem using contemporary theoretical knowledge

Skills - skills resulting from the course:

- to process a specific technical problem in the form of a technical report

- use the theoretical knowledge to solve a given technical task

Competences - competences resulting from the course:

N/A

N/A

Course is included in study programmes:

Study Programme	Type of	Form of	Branch	Stage	St. plan v.	Year	Block	Status	R.year	R.
Engineering	Bachelor	Full-time	Programming of NC Machines	1	2020	2023	Povinné předměty 4. ročníku	A	4	ZS