

Study research of theoretical bases of master's thesis

Study programme: Mechanical engineering			
Type and level of studies: Master academic studies			
Course: Study research of theoretical bases of master's thesis			
Lecturer: Mentor of diploma (master's) thesis			
Course status: Obligatory for all modules, IV semester			
Number of ECTS: 10			
Preconditions:			
<p>The objective of course Application of fundamental, theoretical methodological, scientific-expert and expert-applied knowledge and methods in solving concrete problems in selected field. Within this part of diploma - master's thesis, the student learns about the problem, its structure and complexity, and develops conclusions on possible solutions based on conducted analyses. By studying the literature, the student meets the methods developed for solving similar tasks and engineering practice in their solving. The objective of the student's activities reflects in acquisition of necessary experience through solving complex problems and tasks and through identification of possibilities for application of previously acquired knowledge in practice.</p>			
<p>The outcome of the course The students are qualified to independently apply previously acquired knowledge from different fields studied earlier, in order to perceive the structure of given problem and to systematically analyze it with the aim of reaching the conclusions on possible directions for its solving. Through independent use of literature, the students enlarge their knowledge from selected field and study different methods and papers related to similar problems. Thus, the students develop abilities to conduct analyses and to identify problems within the given subject. By application of acquired knowledge from different fields, the students develop the ability to recognize a place and a role of an engineer in selected field, a need for cooperation with other professions and for team work.</p>			
<p>Course syllabus Course syllabus is formed according to needs for completion of concrete diploma - master's thesis, its complexity and structure. The students read professional literature, diploma works and diploma - master's theses of students engaged in similar subjects, conduct analyses in order to find a solution for concrete task defined by the assignment of diploma - master's thesis. A part of teaching of the course is conducted through individual study research work. Study research also includes active monitoring of primary knowledge on thesis subject, organization and conduction of experiments, numerical simulations and statistical data processing, writing and/or reporting at conferences from narrow scientific educational field to which the subject of diploma - master's thesis belongs. Practical classes: Exercises in computer classroom</p>			
Literature: - journals, diploma - master's theses, publications from the selected field			
Number of active teaching classes			Other classes:
Teaching:	Exercises:	Other forms of teaching:	
		Study research work:	
		20	
<p>Methods of performance Mentor of diploma - master's thesis gives the assignment to the student. The student must conduct the work in the framework of the given subject defined by diploma - master's thesis assignment, by using the literature proposed by mentor. During work on diploma - master's thesis, mentor may give additional instructions to student, refer to specific literature and additionally point to the goal of developing a quality diploma - master's thesis. In the framework of research studies, the student consults with his mentor and, as required, with other teachers that are engaged with the problems from the field of the work. Within the given subject, the student, according to needs, conducts certain measurements, countings, audits and other research and statistical data processing if it is anticipated by the task of diploma - master's thesis.</p>			
Grade (maximal number of points - 100)			
Duties before exam	Points	Final exam	Points
Activities during classes		Final exam (written)	
Colloquium(s)		Final exam (oral)	100
Project(s)			