Tempus Project *University of Kragujevac*

WBCVMnet

WBC Virtual Manufacturing Network
Fostering an Integration of the Knowledge Triangle

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European Commission
TEMPUS

Name	**Design of die**		
Code	CTC-KG-02		
ECTS	4		
Location	KTC Kragujevac, Univerzitet u Kragujevcu, Mašinski fakultet, Sestre Janjić 6, 34000 Kragujevac, Srbija		
Trainer/s	Dragiša Barać (CV dat u prilogu)		
Purpose	In consideration of new market demands, and regarding moving of capital in world level, we need to form professional teams in branch manufacturing of die. Manufacturing of die is begining in design department. Advancement of die in market depends on optimization of die. Paticipants of this training will have to oportunity to learn and train themselfs for the design of die.		
Recommended entry level	7th level of professional qualification, mechanical engineering		
Special requirements	Basic knowledge of metal forming (in brancf sheetmatal).		
Duration	40 hours		
General objectives	Trainees should be able to: -Have knowledge for every phase of diebuilding and design basic die.		
Topics	1. Metalforming, piercing ,bending, and deepdrawing. 2. Analising drawing and tolerances 3. Measuring of parts and presentation to customers. 4. Design of die for piercing. 5. Design of die for bending. 6. Design of die for deep drawing. 7. Process on press (mechanical, hidraulical), and data which are inportant for design 8. Defining of process (progressive and transfer die). 9. Design of progresive die 10. Design of transfer die		
Specific learning outcomes in topics	**Topic 1: Metalforming, piercing ,bending, and deepdrawing**	**Number of hours**	3
	Trainess should be able to: • Understend exchanging in structure of sheetmetal during processing • Design power which we need for deformation		
	Topic 2: Analising drawing and tolerances	**Number of hours**	2
	Trainess should be able to: • Follow importance and requirement on drawing or 3D model of part. • Understend requirements of producers cars • Indicate important areas		
	Topic 3: Measuring of parts and presentation to customers	**Number of hours**	1
	Trainess should be able to: • Know process of measuring and rate succes design according to drawing		
	Topic 4: Design of die for piercing	**Number of hours**	2
	Trainess should be able to: • Design a simple die for piercing		
	Topic 5: Design of die for bending	**Number of hours**	2
	Trainess should be able to: • Design a simple die for bending		
	Topic 6: Design of die for deep drawing	**Number of hours**	2
	Trainess should be able to: • Design a simple die for deep drawing		
	Topic 7: Process on press (mechanical, hidraulical), and data which are inportant for design	**Number of hours**	2
	Trainess should be able to:		

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	• **Define kind of press and force** • **Check possibility to make one operation on press** • **Define strokes which we need on the press**		
	Topic 8: Defining of process (progressive and transfer die)	**Number of hours**	**10**
	Trainess should be able to: • **Define process of getting part by progressive die or transfer**		
	Topic 9: Design of progresive die	**Number of hours**	**10**
	Trainess should be able to: • **Design a simple progressive die**		
	Topic 10: Design of transfer die	**Number of hours**	**6**
	Trainess should be able to: • **Design a simple tansfer die**		

Portfolio assessment	**Trener ocenjuje nivo uspeha u savlađivanju obuke svakog polaznika i to kroz ocenu vežbi i Ispitivanje.**
	Trainer evaluates level of succes in overcoming the training of each student, through assessments exercises and testing.
	
	Rating exercise: Exercise trainer defined on the basis of which can be implemented to assess the degree of learning outcomes. The exercises can be performed individually or in team, in groups of 2-5 trainees.
	
	Examination: Test is defined by trainer on basis of examination which can assess the skills and their application. For this purpose it is necessary to respond to a range of questions. Answers to questions are provided in writing and orally, in a conversation with trainer evaluator.
	Evaluation: Meet 50 - 64%
	                        Successful 65 - 79%
	                        Excellent 80 - 100%
	Performance criteria and the percentage of representation of these techniques in the evaluation module will be given later.		