

Year	2011/2012
Faculty (institute)	Welding
Department	Surface Engineering
Field of study	0923 Welding
Speciality	8.092303 Technology and Equipment of Restoration and Wear Resistance Increase of Machines and Constructions
Degree	master
Qualification level	master
Qualification	research engineer

First Year

First Semester		Second Semester	
Title	Credits	Title	Credits
Intellectual property	1,0	Foreign language	3,0
Marketing	2,0	Pedagogics of higher school	1,5
Surface engineering. Coating engineering	4,5	Fundamentals of scientific research	2,0
Quality monitoring	4,0	Material treatment with concentrated energy flows	4,0
Experimental research methods in welding	3,0	Renovational technologies of welding and related processes	3,0
Statistical methods of risk management in welding	4,0	Mathematical methods of optimization	4,0
Special welding methods	3,0		
Civil defence	1,0	Labour protection	1,0
Computer aided design in welding	3,0	Surface engineering. Coating engineering	4,5
		Fundamentals of measurements and tests	4,0
		Computer aided design in welding	3,0
		Scientific research	6,0
Total	25,5	Total	36,0

Second Year

First Semester		Second Semester	
Title	Credits	Title	Credits
Foreign language	2,5		
Philosophic problems of scientific knowledge	1,5		
Fundamentals of the sustainable development of society	2,0		
Mathematical computer simulation techniques of systems and processes	4,0		
General bases of patents and copyright	2,0		
Physics of solids	3,0		
Thermal mechanical processes in restoration	1,0	Research practice	6
Applied dynamics of concentrated energy flows	3,0	Master Thesis Preparation	25,5
Innovational processes in surface engineering	2,0		
Computer simulation in surface engineering	3,0		
Scientific research	6,0		
Total	27,5	Total	31,5

- humanities, social and economical courses
- mathematical, natural and scientific courses
- professional and practical courses