Title of Course	Materials Science - Laboratory		
Semester	Autumn/Spring		
Teaching Hours per Course:	Total	Lectures	Tutorials
	15	0	15
ECTS Credits	1.0		
The content of education			
Aims of Course	Acquiring basic knowledge in the field of construction and types of sanitary installation materials, their tooling and welding processes. Understanding of developing trends in this area, acquiring the ability to obtain information from various sources and the ability to cooperate in a team.		
Program	L1 - Introductory classes and health and safety regulations. L2 - Microscopic test of steel, cast iron and non-ferrous alloys. L3 - Static tensile test and hardness test of materials. L4 - Workshop measurements with measuring tools and ultrasonic testing. L5 - Arc welding with coated electrode and MAG method in processing material. L6 – Making detachable connections of tubes and bending tube. L7 - Making inseparable connections of tubes.		
Conditions of completion	**Grading Standard:** The prerequisite for passing is limited by: the presence on every Laboratory class, drawing up documentation of each exercise and writing colloquium before each exercise. Final grade of the course is the arithmetic average of all positive grades whit documentations and colloquiums. **Grade** 2.0; 3.0; 3.5; 4.0; 4.5; 5.0		
Teacher	Ph.D. Jacek Szpetulski		