

<b>Type &amp; field of studies/ Program title:</b>	<b>M.Sc in Mechanical Engineering Thermal Power Systems and Installations</b>		
<b>Faculty/Department:</b>	Faculty of Mechanical Engineering Institute of Process and Power Engineering		
<b>Erasmus subject code:</b>	06.9		
<b>Duration:</b>	4 semesters		
<b>ECTS credits:</b>	105		
<b>Program description:</b>	<p>The graduates of Thermal Power Systems and Installation Studies obtain higher education in the field of power engineering, construction of power machines and installations, transmission and distribution of thermal and electric energy. Students acquire an extensive knowledge in the field of heating engineering. They acquire necessary skills to design and operate large thermal-electric power stations and a knowledge in the field of design, construction and operation of individual heating installations. Graduates can carry out process and strength calculations and design power machinery such as steam and gas boilers, electrical generators, pumps, fans, steam and water pipelines.</p> <p>During their studies, students acquire practical skills in power machines design and numerical modeling using commercially available software CAD (Computer aid design), FEM (Finite Element Method) and CFD (Computational Fluid Dynamics).</p> <p>The graduates also become the specialists in the field of renewable resources utilization such as water energy, biomass combustion, solar, wind and geothermal energy, and fuel cells. They are well prepared in the field of nuclear engineering and dissipated energy resources: combustion engine- generator, gas turbine-generator.</p> <p>Students of “the Thermal Power Systems and Installation” studies acquire the knowledge in the field of the design and operation of the environment protection systems and installations in power engineering.</p>		
<b>Programme of studies:</b>	1 <sup>st</sup> semester	Hours	ECTS
	Mathematics	45	5
	Numerical method	60	6
	Phisycs	30	3
	Thermodynamics	60	5
	Material Science	30	5
	Philosophy	30	2
	2 <sup>nd</sup> semester		
	Strength of materials	45	4
	Fluid Mechanics	60	5

Heat Transfer	60	5
Combustion	30	3
Environment protection	30	2
Computer Methods for Engineers	45	2
3 <sup>rd</sup> semester		
Analysis, Modeling and De- -sign of Energy Systems	60	6
Power turbines	45	4
Energy Management	30	3
Heat and Power Plants	30	5
Power Boilers	30	4
Heating Engineering	30	2
Renewable Energy Resources	30	2
Individual Project	90	9
4 <sup>th</sup> semester		
Diploma Seminar	30	3
Master Thesis		20

**Web page:**

**Eligibility/Admission:**

Students who have completed Bachelor Programme in Mechanical Engineering (or related field) and obtained Bachelor's Degree

**Fees:**

4000 Euro per year

**Contact person:**

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**Application procedures  
& deadlines:**

Scans of the following documents are to be submitted by persons applying for admission by 31 May: -Application Form (available to be downloaded from [www.bwm.pk.edu.pl](http://www.bwm.pk.edu.pl)), - bachelor's diploma, -Official Transcript, -passport (page with the holder's photo), -doctor's report (available to be downloaded from [www.bwm.pk.edu.pl](http://www.bwm.pk.edu.pl)). Note: Both diploma and Official Transcript are to be officially translated into Polish language. Please, send all documents via e-mail to Ms. Kamila Rościszewska at [kamir@pk.edu.pl](mailto:kamir@pk.edu.pl)