

## Master Thesis Brief Description

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<b>Thesis Title</b>	<b>Energy Analysis of a Steam Power Generation Cycle</b>
<b>Programme of Studies</b>	MSc in Energy Systems and the Built Environment
<b>Course</b>	MES 580 Master Thesis
<b>Area of Study</b>	Processes Modelling and Simulation
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<b>Semester</b>	Fall Semester 2017
<b>Short Description</b>	<p>The present study deals with the comparison of energy analyses of thermal power plants stimulated by coal. The energy supply to demand narrowing down day by day around the world, the growing demand of power has made the power plants of scientific interest, but most of the power plants are designed by the energetic performance criteria based on first law of thermodynamics only. The actual useful energy loss cannot be justified by the first law of thermodynamics, due to the fact that the quality and quantity of energy are not different. In particular, the terms: energy, energy conversion, steam turbine and steam generator are analyzed in terms of their general characteristics and their functions in the field of engineering.</p> <p>The aim of this thesis, is to introduce the reader into the thermal energy conversions that have the purpose to produce work. The attention will be focused, to the classic cycle of work production with steam, the Rankine cycle, while discussing key issues concerning the main appliances (steam boilers - steam turbines) used in steam-generating installations. Also the understanding of natural phenomena and their detailed mathematical presentation.</p>