

## Master Thesis Brief Description

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<b>Thesis Title</b>	<b>Design of a cooling network for industrial Units</b>
<b>Programme of Studies</b>	MSc in Sustainable Energy Systems
<b>Course</b>	SES 701 Maser Thesis I + II
<b>Area of Study</b>	Sustainable Energy Technologies
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<b>Supervisory Committee</b>	Dr. Constantinos Hadjiyiannis, Frederick University Dr. George Karagiorgis, Assoc. Professor, Frederick University
<b>Semester</b>	Fall Semester 2022
<b>Short Description</b>	<p>This dissertation focuses on the design of an efficient cooling network tailored for industrial units. As industries continue to expand, optimizing energy consumption and minimizing environmental impact become paramount. The study delves into the intricate balance between cooling requirements and resource utilization, aiming to develop a systematic approach for network design. Through comprehensive analysis of diverse industrial processes and their corresponding cooling needs, this research integrates principles of thermodynamics, fluid dynamics, and network theory. The proposed cooling network design emphasizes heat exchange integration, selection of appropriate cooling technologies, and the establishment of an adaptable infrastructure. By addressing the unique demands of various industries within the network, a holistic solution is sought that enhances energy efficiency, reduces operational costs, and mitigates overall environmental footprint. This dissertation contributes valuable insights for engineering sustainable cooling networks, pivotal for fostering industrial growth while aligning with global environmental goals.</p>