

## Master Thesis Brief Description

---

<b>Thesis Title</b>	<b>Future Trends and Transition to Next-Generation Dynamic Digital Energy Performance Certificates</b>
<b>Programme of Studies</b>	MSc in Sustainable Energy Systems
<b>Course</b>	MES 580 Master Thesis
<b>Area of Study</b>	Computational Building Physics – Buildings Assessment
<b>Student's Name</b>	Michelle Sibusisiwe Duri
<b>Students Reg. Number</b>	9806
<b>Supervisor</b>	Dr.-Ing. Paris A. Fokaides, Ass. Professor, Mechanical Engineering Department
<b>Supervisory Committee</b>	Dr Byron Ioannou, Ass. Professor, Architectural Department Dr. George Karagiorgis, Assoc. Professor, Mechanical Engineering Department
<b>Semester</b>	Fall Semester 2020
<b>Short Description</b>	<p>This final year project explores the future trends and transition towards next-generation dynamic digital Energy Performance Certificates (EPCs). Energy Performance Certificates are crucial tools for assessing and improving the energy efficiency of buildings. However, traditional static EPCs have limitations in accurately reflecting a building's real-time energy performance. This research investigates emerging technologies and methodologies to develop dynamic digital EPCs that can continuously monitor and update energy performance data, enabling real-time insights and feedback.</p> <p>The project involves an in-depth literature review to understand current EPC practices, followed by the design and implementation of a prototype dynamic digital EPC system. Data from selected buildings will be collected and analyzed to demonstrate the system's effectiveness. The findings aim to contribute to the optimization of building energy efficiency and support policy-makers, building owners, and stakeholders in making informed decisions for sustainable energy consumption in the built environment.</p>