Thesis Title	**Scan-to-BIM for Automated As-Built Modeling and Building Renovation**
Programme of Studies	MSc in Energy Engineering
Course	MEE 540 - MSc Thesis
Area of Study	Experimental Building Physics – In-situ Measurements
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Short Description	This thesis investigates Scan-to-BIM methodologies for automated as-built modelling and building renovation. Laser scanning and photogrammetry techniques are analysed for capturing accurate point cloud data, which are then converted into BIM models using tools such as Revit, Cyclone, and parametric workflows. A case study demonstrates the benefits of Scan-to-BIM in documentation accuracy, renovation planning, and facilities management. The research highlights best practices, limitations, and opportunities for improving efficiency and quality in the digital transformation of the construction sector.