

MME 4499 – Mechanical Engineering Capstone Project Proposal Document

Name of Sponsor	Thornhill Research Inc.
Title of Project	
Increasing robustness of the MOVES SLC assembly	
Brief Project Description	
<p>MOVES SLC is an innovative medical device at the TRL-9 level that is FDA cleared, Health Canada approved, and CE marked.</p> <p>It is a micro-integrated life support system, which combines an O2 concentrator, a unique O2-conserving ventilator, suction, and complete vital signs monitoring into a single, compact, portable, battery-operated device. Thornhill Medical's patented circle-circuit ventilator, in combination with the integrated O2 concentrator, means MOVES SLC can effectively eliminate the need to carry heavy, bulky, and dangerous high pressure O2 cylinders.</p> <p>The MOVES SLC design dates from the mid-2010s and although robust, would benefit from a review of its mechanical design, with a specific emphasis on the optimization of joining and weight reduction.</p>	
Desired Project Deliverables	
<p>Report indicating:</p> <ul style="list-style-type: none">• Areas that can be improved and proposed solutions• Evidence that the proposed solutions wouldn't negatively impact MOVES SLC's standards compliance	