UNIVERSITÉ Concordia UNIVERSITY

GINA CODY SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Department of

AERO 490 Capstone Aerospace Engineering Design Project

2020-2021

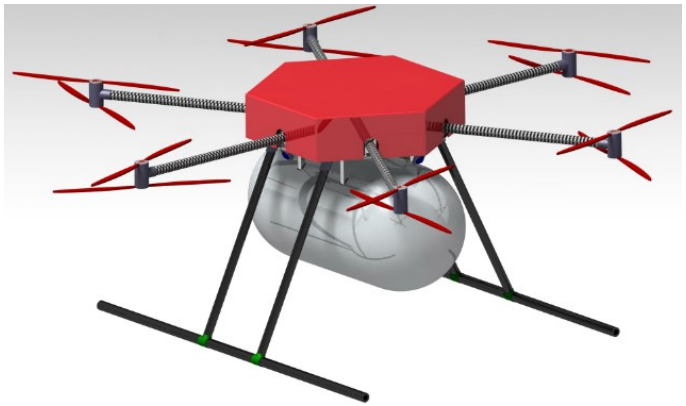
- This year, within the AERO490 Capstone project, the students conceived and tested an innovative solution to the challenge of transplant organ transport: Fast and safe aerial transport by drone.

- They designed a drone from scratch capable of delivering a 15 kg payload (organ in an ice-box) over a 50 km round trip.

- The project included significant hands-on experiences, for example, thrust and noise testing, building and testing a 3D-printed model in a wind tunnel, and building and testing a fully functional small-scale flight prototype to validate performance.

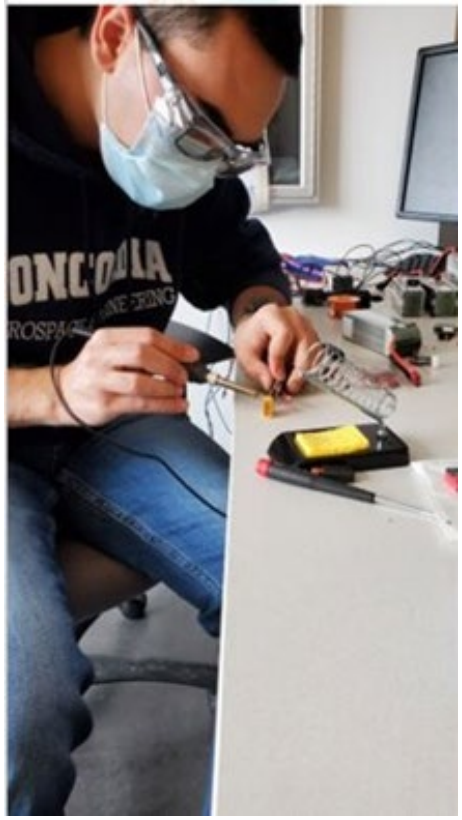
- Beyond the scope of the capstone project, a group of AERO490 students participated in and reached the semi-finals of the competitive nationwide TELUS innovation challenge.

- In the continuity of this initiative, a team of four AERO490 students will start in May the District3's 10-week validation program to bring their solution and their hard-earned drone design skills and knowledge to market.



Organ transport drone - CAD design

Printed-3D model wind tunnel testing



Flight prototype assembly

Flight testing

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