

Students' Graduation Project Abstract

Department:	AMT	Semester: 2	Spring-2022
Project Title:	Quad-Copter "Drone" with Solid-State Rotors		
Supervisor:	Eng. Yahya Chahbar		

Abstract:

The goal of this project is the design, analysis, fabrication and testing of a quadcopter unmanned aerial vehicle (UAV) that utilizes special materials to achieve control and improvement of **performance of its rotor blades**.

The team members are expected to have an exceptional work ethic and dedication to the project.

The team will design, fabricate and test of the solid-state rotors as well as power/sensing electronics. The prototypes will be implemented on a **quadcopter** for demonstration purposes.

The students should be very comfortable with:

- 1) Design and analysis software such as Matlab, Ansys, Fluent, Siemens NX other CAD packages, LabVIEW, etc.
- 2) Simple analog or digital electronics such as resistors, capacitors, op-amps, microcontrollers (Arduino), simple wiring, etc...
- 3) Fabrication techniques such as 3D printing, bonding, manual fabrication...

