Project I Description

Project Name: **Solar Aircraft**

Team Size: **2 MEE Students**

Project Overview	
Development of unmanned solar powered aircraft has attracted attention of several agencies over the past decade because of their promising potential in military and civilian applications. In Lebanon such aircraft could be used as communication links or sensors to monitor remote areas. The objective of this current research is to successfully design and build an unmanned solar powered aircraft that is able to fly continuously for several hours. The aerodynamics of the aircraft has to ensure maximum efficiency. The solar cells must be properly embedded in the aircraft. The structure has to be optimized along with the material selection to ensure minimal weight. Appropriate amount of batteries has to be optimized along with other needed electronic components	
Project Areas and Majors	
Aerodynamics (1 MEE Student)	Structural Mechanics /Instrumentations (1 MEE Student)
Project Deliverables	
• Optimal Aerodynamic Design • Dynamics and stability of the Aircraft • Structural finite elements design • Reliably embed solar cells in the wings • Optimize of the amount of batteries • Build a **WORKING** prototype • Test the prototype to achieve more than 2 hours of continuous flight	

Advisors: Drs. Michel Khoury and Barbar Akle

Students:

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