

ENGR 7A Product Specifications

Size requirements:

Diagonal motor-to-motor distance must be smaller than 14 inches.

Structure requirements

- (a) Multiple provided materials can be used to construct the quadcopter.
- (b) You are allowed to use raw materials purchased externally with the permission of your TA or technical staff
- (c) Structures must be fabricated in-house or off-site with permission.

Power and propulsion requirements

- (a) The use of internal combustion engines (gas and glow fuel engines) is prohibited.
- (b) Quadcopter must be able to levitate for at least five (5) minutes without replenishing/recharging its energy source.
- (c) Altitude should remain under 8 feet.
- (d) Preferred operating altitude should be 2-6 feet.

Safety requirements

- (a) All propellers must have protective guards covering at least 25% circumferential distance and extending at least 0.5 inches beyond the tip of the propeller.
- (b) All wires and connectors are to be completely covered and insulated.
- (c) All batteries will be charged by staff members

Cost requirements

- (a) Total as-built replacement cost of the quadcopter must be less than \$400.
- (b) The cost must be broken down into a Bill of Materials (BOM)/Parts List, in which the Fair Market Value (FMV) of each component must be listed.