



Project
MPE /MDP
414



Benha University

Shoubra Faculty of Engineering

Mechanical Engineering Department

4th year 2017/2018

No.	Project name	Description	Supervisors
1	Integrated PV panels	Design the improvement system for cooling system to maintain the highly performance of PV. Also create the technique to overcome the dirt and dust effects on PV panels.	- Dr. Ghazy - Dr. Mostafa
2	Green building and smart home	Design the integrated system with fully controlled via smart technique. Also, build the green building dependent on the green energy and decrease the consuming energy.	- Dr. Ghazy - Dr. Mostafa
3	Aerodynamic vehicle control	Design the control system to oriented the airstream to create the required aerodynamic forces 'drag, lift, down force and side force' to optimize the driving characteristics. The driver will do a little effort to achieve the stability of the vehicle especially around the corners and in windy day.	- Dr. Elkady - Dr. Mostafa
4	Energy harvesting	Study the energy harvesting from moving cars on synesthetic bumps located at the entrance of private driveways and in government facilities which is characterized by high densities. A laboratory apparatus will be designed which is divided into two main parts, electrical part that uses a linear power generator and the other using hydraulic circuit to drive rotary generator.	- Dr. M.Sokar - Dr. Mostafa



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5	Carbon fiber 3D printer	Using carbon fiber for 3D printing applications allows our customers to create parts that have exceptional mechanical properties with a sleek carbon fiber appearance. Design the CNC table will be attach the carbon fiber source.	- Dr. Mostafa
6	Drive quadcopter by virtual reality	Design the virtual reality technique to drive the quadcopter. It will able to create advanced mission with object tracking and different tasks.	- Dr. Mostafa
7	Nano particles machine	Processes for the production of nanoparticles Production. Installation and manufacturing the nanoparticles reactor mechanism to produce the different types of nanoparticles.	- Dr. Hanaa - Dr. Doaa - Dr. Mostafa