



Philadelphia University

The Mechatronics Engineering Department

List of Students, Supervisors, and the Assigned Projects (2)

Student name	Project Title	Supervisor
Ragid Manasrah	Design and implementation of weather station	Dr. Ashraf Saleem
Ibrahim Saeed		
Ammar Darweesh		
Loay Al-bitar	Solar Car	Dr. Tarek Tutunji
Rami Hussain	Intelligent Power Management	Dr. Tarek Tutunji + Dr. Ashraf Saleem
Ahmad Raed		
Omar Rajeh		
Sami Nimer	Wireless Autonomous Robot	Dr. Ashraf Saleem
Mohammad Tahsin		
Anas Ibrahim	Inverted Pendulum Control	Dr. Tarek Tutunji
Mohammad Ibrahim		
Samer Mayasa		
Haytham Al-khateeb	Design and Implementation of instruments to measure physical variables	Prof. Munther



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List of Supervisors, and the Assigned Projects (1)

Project Title	Supervisor
Controller for Internal Combustion Engine	Dr. Sabah Sheet
Prototype for Hybrid Solar Energy Car	
Solar Energy Controller for a max. of 20kw Building	Dr. Sabah Sheet + Dr. Ahmad Qandeel
Solar Energy Power Generation for Lab Elevator Model	
Controller for Heart Training Kit	Dr. Ahmad Qandeel
Walking Robot	Dr. Tarek Tutunji
Control of Process Paint Mixing	
Control of Tablet Filling Machine	
Automated Car Park	Dr. Ashraf Saleem
Autonomous Gun Robot	
Wireless Crane	
Home Made Air Conditioner	Dr. Ahmad Saleh
A device for Heating and Sterilizing of Water	
Experimental Study for Controlling the Solar Cooker	
Smart House Cleaner	Eng.Sona Al-Younis
Chocolate Machine	

Eng.Sona Al-Younis



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List of the Assigned Projects (1)

Project Title

Controller for Internal Combustion Engine

The energy obtained from burning fuel mixture in combustion engine chamber of a car can be change depending on the materials used for the mixture and the percentage of each.

A study found that adding a methanol to Jordanian oil (imported from Iraq) will cause to increase energy obtained from burning the new mixture.

The project is to build a prototype for combustion engine of a car to study the effect of adding methanol to the conventional mixture then to design and implement a controller to study (aiming to increase) the energy obtained from burning the mixture by changing the percentage of mixture ingredient.

Prototype for Hybrid Solar Energy Car

Changing speed of a car depend on the amount of fuel provided by the car paddle and / or the nature of the road moving on.

In hybrid cars dc machine operate as a motor to start a car can uses to drive the car too. In these cars dc motor convert electric power obtained from the batteries to mechanical power which can add to the mechanical power obtain from fuel to help the car moving on decelerating road (when driving the car on a hill). To store energy, dc machine operate as a generator and provide power to the batteries of the car when the car moving on accelerating road (driving down a hill).

The project is to do a study idea of hybrid car and build a prototype in the lab.

Solar Energy Controller for a max. of 20kw Building

Solar energy as an alternative source of energy has advantage over oil that it gives energy without causing any pollution. Jordan as a Middle East country relies on imported oil to generate electric power. Having sun available for around 12 h /day is a good opportunity to use solar as a direct source of energy during the day and indirect source during night.

The project is to study and analyze power consumption of a school to find the total amount of electric power required then design and build a solar power source supply to provide the majority of this power

Solar Energy Power Generation for Lab Elevator Model

Solar energy as an alternative power source can be uses to run the motor of elevator model available in the automation lab.

Nowadays having the motor of elevators locate at the upper floor of the building make it easier to arrange a set of solar cell on the roof of the building to provide electric power to the elevator motor,

The project aim is to design and implement a solar set together with a controller to adjust the alignment of the solar set to have it facing the sun during its daily movement.

Controller for Heart Training Kit
Walking Robot
Control of Process Paint Mixing
Control of Tablet Filling Machine
Automated Car Park
Autonomous Gun Robot
Home Made Air Conditioner
A device for Heating and Sterilizing of Water
Experimental Study for Controlling the Solar Cooker
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