

ACC - Automatic Control Circuits and Virtual Labs for Mechanical Power Systems

ACC Vision

Our vision is to become -within the next 5 years- one of the most important, and accredited automatic control centers in the Egyptian Universities. Our Scope is to teach advanced automatic control systems for undergraduates and postgraduates and to offer practical-training, design projects, technical and professional consultations. Our activities will cover various thermo-fluid and heat transfer processes existing in practical mechanical power applications. Automatic control systems will include Virtual Labs, PCs and IT applications, Hydraulics, Pneumatics, SCADA systems, PLC and micro-controller technologies.

ACC Mission

To help the Mechanical Power Engineering Department at FECU to be qualified for academic accreditation by fulfilling these objectives:

- ❖ To improve teaching effectiveness, evaluation/assessment procedures, practical training methods, and self-learning techniques in MEP Programs for both undergraduate and postgraduate students. This will be implemented in the area of utilization of modern automatic control systems and virtual labs for practical and industrial mechanical power applications.
- ❖ To create distinguished attributes for MEP graduates. These important attributes are acquiring advanced/high level education and sufficient practical training in the fields of utilization of modern automatic control systems, PCs, information technologies, and virtual labs for practical and industrial mechanical power applications.
- ❖ To promote and help engineering students to follow modern E-learning methods, to search for technical information on-the net, and to use self-training virtual programs in modern and advanced automatic control systems. This improves professional/practical skills and meets the current requirements of job market. This will ensure them better jobs with higher salaries.
- ❖ To promote students doing practical projects and execute applied/marketable models for hydraulic/pneumatic circuits, PLC and microcontroller automatic control systems for industrial mechanical power applications.
- ❖ To create continuous education opportunities for engineers/technicians and postgraduate students in many modern automatic control systems by offering practical-comprehensive training courses which apply hydraulics/pneumatics, PLC and microcontroller systems for industrial mechanical power applications, environment protection and for energy management.
- ❖ To create additional-work opportunities for young faculty members and TA-staff. This will also improve their practical skills in all ACC activities including teaching, design, and consultations.
- ❖ To create new generations of academic teaching and training staff specialized in modern and advanced automatic control systems. Further to create skilled technical staff to perform practical construction and maintenance procedures as required as part of ACC consultation activities.
- ❖ An important objective is to spread ACC mission and activities for various Egyptian Engineering schools/Institutions and to create strong links and channels for cooperation with similar Egyptian centers/labs which work in the fields of automatic control systems and virtual labs related to practical Mechanical Power engineering applications.