

Fluid Power the Essence of Manufacturing Automation

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Greenville Technical College introduced Mechatronics system Technology in the fall semester 2008. Conducting our first pneumatics/hydraulics course spring 2009. Greenville Technical College along with four upstate South Carolina Technical Colleges adopted a standard curriculum using Siemens Mechatronics Systems Certification Program and standard lab equipment manufactured by FESTO Corporation.

Mechatronics Certificate 1 presents the students with a study of the fundamental principles for fluid power driven systems pursuing a career in the area of Mechatronics who have no prior knowledge of fluid power systems. The student will gain an understanding of structure, function, and application of cylinders, valves, and other flow control components. The student will perform logic operational analysis, calculations and decisions relating to pneumatic/hydraulic circuits, along with designing and building the pneumatic/hydraulic circuits with industrial-caliber components.

Mechatronics Certificate II continues to build upon skills acquired in certificate I with the introduction of automated controls using PLC's, sensors and robots. Students design a fluid power system which duplicates an electrical motor driven system. This design and implementation of a working process provides an in-depth study of structure, function, and application of cylinders, valves, and other flow control components acquired in certificate I. Fluid power is an integral component of many manufacturing processes. Greenville Technical College is driving the increased knowledge and skill sets our employees require by proving the students with the knowledge and skills to utilize the unlimited potential of fluid power driven systems.