COURSE DESCRIPTIONS BY COURSE DISCIPLINE PREFIX

ELC ELECTRICITY

ELC-113 Residential Wiring 4 (2-6) AND
Prerequisites: None
Corequisites: None
This course introduces the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading planning, layout and installation of electrical distribution equipment lighting overcurrent protection conductors branch circuits and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations.(2013 FA)

ELC-114 Commercial Wiring 4 (2-6) AND
Prerequisites: None
Corequisites: None
This course provides instruction in the application of electrical tools, materials, and test equipment associated with commercial electrical installations. Topics include the NEC safety electrical blueprints planning, layout, and installation of equipment and conduits and wiring devices such as panels and overcurrent devices. Upon completion, students should be able to properly install equipment and conduit associated with commercial electrical installations.(2013 FA)

ELC-115 Industrial Wiring 4 (2-6) AND
Prerequisites: None
Corequisites: None
This course covers layout, planning, and installation of wiring systems in industrial facilities. Emphasis is placed on industrial wiring methods and materials. Upon completion, students should be able to install industrial systems and equipment. (2013 FA)

ELC-117 Motors and Controls 4 (2-6) AND
Prerequisites: None
Corequisites: None
This course introduces the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits.(2013 FA)

ELC-128 Intro to PLC 3 (2-3) AND
Prerequisites: None
Corequisites: None
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to understand basic PLC systems and create simple programs.(2013 FA)

ELC-131 **Circuit Analysis I** **4 (3-3)** **Fall**
Prerequisites: None
Corequisites: None
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics design, construct, verify, and analyze DC/AC circuits and properly use test equipment.(2013 FA)

ELC-215 **Electrical Maintenance** **3 (2-3)** **AND**
Prerequisites: None
Corequisites: None
This course introduces the theory of maintenance and the skills necessary to maintain electrical equipment found in industrial and commercial facilities. Topics include maintenance theory, predictive and preventive maintenance, electrical equipment operation and maintenance, and maintenance documentation. Upon completion, students should be able to perform maintenance on electrical equipment in industrial and commercial facilities.(2007 FA)