

PROCESS TECHNOLOGY (PROS)

PROS 100 Introduction to Process Technology3 Credits

Provides an overview or introduction into the field of Process Operations within the process industry. The course will introduce the roles and responsibilities of process technicians, the environment in which they work, and the equipment and systems in which they operate.

PROS 117 Electronics I3 Credits

Fundamentals of practical and theoretical DC and AC circuits. Application of basic entry skills and analysis/verification of theoretical results. Introduces the basic skills required by many careers in electronics and related fields. Operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes, and introducing basic digital concepts. Emphasis on common test instruments in troubleshooting, working on real-world and applicable projects. Lecture/lab format.

PROS 118 Electronics II3 Credits

Advanced DC, AC and digital circuitry. Analysis and verification of theoretical results with practical applications. Builds on PROS 117 Electronics I and covers advanced concepts of DC and AC circuits. Includes expanded treatment of power supplies, dual-supply rectifier circuits, and Zener diode, voltage regulators. Includes digital concepts. Emphasis on common test instruments in troubleshooting, working on real-world projects. Lecture/lab format.

Prerequisites: PROS 117.

PROS 120 Process Technology I: Equipment4 Credits

Provides an overview or introduction into the field of equipment within the process industry. This course will introduce many process industry-related equipment concepts including purpose, components, operation, and the Process Technician's role for operating and troubleshooting the equipment.

PROS 195 Independent Study1-4 Credits

Course may be taken multiple times up to maximum of 6 credit hours.

PROS 196 Topics:1-3 Credits

Course may be taken multiple times up to maximum of 15 credit hours.

PROS 220 Process Technology III: Operations4 Credits

Provides an introduction to the field of operations within the process industry. Students will use existing knowledge of equipment, systems, and instrumentation to understand the operation of an entire unit. Students study concepts related to commissioning, normal startup, normal operations, normal shutdown, turnarounds, and abnormal situations, as well as the Process Technician's role in performing the tasks associated with these concepts within an operating unit.

PROS 230 Quality in Process Technology3 Credits

Provides an introduction to the field of Quality within the Process Industry. This course will introduce many process industry-related quality concepts including operating consistency, continuous improvement, plant economics, team skills and statistical process control (SPC).

PROS 290 Certification:1 Credit

Capstone certification preparation specifically addressing each emphasis and associated certifications. Addresses Certified Electronics Technician (CET) program and other certifications.

PROS 292 Capstone4 Credits

Knowledge to articulate the tactical planning functions performed within field projects. Access and apply the various tactical planning tools and data elements to supporting documentation including troubleshooting. Economic principles in costing, value, capital investment, profitability and inventory.