

PWEG - POWER GENERATION ENGINEERING (PWEG)

***Course Fees are Per Credit Hour**

PWEG 240. Fundamentals of Commercial Power Generation. (2 Credits)

This course reviews the history of commercial electric power generation, introduces the technical basics of modern power generation methods (including fossil fuel, hydroelectric, solar, wind, and geothermal), and explores the various roles that engineering-related professionals play in power generation industries. Prerequisite or Corequisite: MA 125.

Course Fees: \$60

PWEG 345. Power Plant Equipment and Systems. (4 Credits)

This course examines the systems, equipment, and instrumentation commonly encountered in electric power generation industries. Equipment and instrumentation for thermal, fluid, electrical, mechanical, control, and safety systems are covered. Hands-on laboratory experiences are required and included in the 2 laboratory hours per week. Prerequisites: EG 130, MA 125, PH 242 or PH 252, PWEG 240.

Course Fees: \$60

PWEG 355. Transmission, Distribution, and Grid Systems. (3 Credits)

This course examines the processes, functions, operations, and newest developments related to electric transmission, distribution, and grid systems. Topics include power loads, modeling, analysis, controls, power quality, cable systems, reactive power, protection systems, and smart grids. Prerequisites: EG 120, MA 126, PH 242 or PH 252, PWEG 240, PWEG 345.

Course Fees: \$60

PWEG 440. Electric Power Reliability and Maintenance. (4 Credits)

This course examines the role of reliability and maintenance processes in electric power generation industries. Topics include identifying and troubleshooting faults, inefficiencies, equipment failures, system disturbances, and preventive/corrective maintenance procedures and processes. Hands-on laboratory experiences are required and included in the 2 laboratory hours per week. Prerequisites: EG 390, MA 126, PH 242 or PH 252, PWEG 355.

Course Fees: \$60