

PSET

Courses

PSET 110 Power Systems CAD

3 Credits. 2 Lecture Hours. 3 Lab Hours.

A course on computer aided drafting and design for power systems. Topics include: CAD fundamentals; and designing, modifying, and editing documents that apply to the power systems industry.

Prerequisites: AFL 085, and AFM 095 or MAT 120, or appropriate placement test scores

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=110subject_code=PSET)

PSET 120 Advanced CAD with GIS

3 Credits. 2 Lecture Hours. 2 Lab Hours.

A course on advanced skills for computer-aided drafting and electronic mapping as applied to the power grid system. Topics include: geographic information systems (GIS), power grid mapping, map databases, spatial positioning, analysis, modeling, and visualization.

Prerequisites: PSET 110

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=120subject_code=PSET)

PSET 130 National Electric Code and National Electric Safety Code

2 Credits. 1 Lecture Hour. 2 Lab Hours.

A course on the purpose, intent, use, and enforcement of the National Electric Code (NEC) and the National Electric Safety Code (NESC) in electrical design and in specifications of equipment used in power systems.

Prerequisites: EET 131

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=130subject_code=PSET)

PSET 140 Power Systems Foundations

3 Credits. 2 Lecture Hours. 2 Lab Hours.

An introduction to electrical power systems from generation to utilization. Topics include: purpose, composition, operating characteristics, and design considerations of power system components; power quality and safety; fundamentals of AC waveforms including single and three phase connections, voltage and current calculations; per-unit representation; and power factor.

Prerequisites: EET 131

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=140subject_code=PSET)

PSET 150 Electrical Power Technology Studies: Adv

30 Credits. 30 Lecture Hours. 0 Lab Hour.

Students complete apprenticeship education, post-secondary education, or work experience related to skills used in the electrical power industry.

Prerequisites: Program Chair consent

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=150subject_code=PSET)

PSET 191 Part-Time Cooperative Education 1: Power Systems Engineering Technology

1 Credit. 1 Lecture Hour. 20 Lab Hours.

Students seeking an associate's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=191subject_code=PSET)

PSET 192 Part-Time Cooperative Education 2: Power Systems Engineering Technology

1 Credit. 1 Lecture Hour. 20 Lab Hours.

Students seeking an associate's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 191

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=192subject_code=PSET)

PSET 193 Part-Time Cooperative Education 3: Power Systems Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 192

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=193subject_code=PSET)

PSET 194 Part-Time Cooperative Education 4: Power Systems Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 193

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=194subject_code=PSET)

PSET 195 Part-Time Cooperative Education 5: Power Systems Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fifth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 194

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=195subject_code=PSET)

PSET 196 Part-Time Cooperative Education 6: Power Systems Engineering Technology**1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their sixth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 195

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=196subject_code=PSET)

PSET 198 First Year Special Topics in Power Systems Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A course on selected topics related to Power Systems Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=198subject_code=PSET)

PSET 199 First Year Independent Project in Power Systems Engineering Technology**1-9 Credits. 0 Lecture Hour. 0 Lab Hour.**

A project related to Power Systems Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Power Systems Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=199subject_code=PSET)

PSET 225 Industrial and Commercial Power Design**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on design of industrial and commercial building electrical distribution systems. Topics include: load calculations, wiring devices, overcurrent protection, conductors, conduit and raceway systems, panelboards and switchboards, voltage drop calculations, grounding and bonding, branch circuit and feeder design, and motor circuits.

Prerequisites: PSET 120, PSET 140

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=225subject_code=PSET)

PSET 230 Conductors and Electrical Safe Work Practices**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on wires, cables, and connectors used in power systems. Topics include: selecting, sizing, insulation, testing, maintaining conductors, and review of OSHA requirements governing electrical safe work practices.

Prerequisites: PSET 130, EET 132

View Sections (http://webapps.cincinnatistate.edu/wwwTools/MCL/default.aspx?course_number=230subject_code=PSET)

PSET 245 Electronic Mapping**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on electronic mapping as it applies to the power smart grid. Topics include: electrical grid mapping, navigation electronic mapping, electronic map databases, and spatial position geographical coordinates combined with spatial positioning systems for location-based services.

Prerequisites: PSET 140, EET 132

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=245subject_code=PSET)

PSET 250 Power Transmission and Distribution Design**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on overhead and underground transmission and distribution systems. Topics include: operation, maintenance, and monitoring of transmission and distribution equipment; transmission line parameters; power flow; design of conductor support structures; overview of system protection; smart grid concepts; and data collection mechanisms.

Prerequisites: PSET 120, PSET 140

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=250subject_code=PSET)

PSET 255 Smart Devices**3 Credits. 2 Lecture Hours. 2 Lab Hours.**

A course on smart grid communication. Topics include: standards and protocols from electricity generation to end user, technologies electric utilities use to monitor and manage infrastructure, and devices and control systems for commercial and residential customers to optimize energy usage.

Prerequisites: PSET 140, EET 132

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=255subject_code=PSET)

PSET 260 Stationary Engineering with Instrumentation and Controls**4 Credits. 3 Lecture Hours. 3 Lab Hours.**

A course on steam plant operation and associated instrumentation and controls. Topics include: basic components; maintenance requirements for utility boilers; combined cycle and cogeneration systems; nuclear steam generation; standard pressure and horsepower calculations; and control of major steam boiler processes.

Prerequisites: EMET 140, EMET 240

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=260subject_code=PSET)

PSET 265 Smart Grid System Design**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

Students complete a project to design a smart grid system by integrating intelligence of electronic mapping and smart grid devices for electric utilities, consumers, and commercial businesses.

Prerequisites: PSET 245, PSET 255

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=265subject_code=PSET)

PSET 275 Protective Relays and Controls**3 Credits. 2 Lecture Hours. 3 Lab Hours.**

A course on protective relays and their application to electric transmission and distribution systems. Topics include: power regulation and communication requirements; electro-mechanical relays and breakers, microprocessor relays and synchrophasors; transformers; transmission and distribution lines; capacitor banks; and regulator protection.

Prerequisites: PSET 225

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=275subject_code=PSET)

PSET 290 Power Systems Capstone**2 Credits. 1 Lecture Hour. 2 Lab Hours.**

Students work in teams to complete a design project. Topics include: design concepts, modeling, detail and assembly drawings, bill of materials, vendors, costs, and manufacture of prototype.

Prerequisites: PSET 220

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=290subject_code=PSET)

PSET 291 Full-Time Cooperative Education 1: Power Systems Engineering Technology**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: None

View Sections (http://webapps.cincinnati.state.edu/wwwTools/MCL/default.aspx?course_number=291subject_code=PSET)

PSET 292 Full-Time Cooperative Education 2: Power Systems Engineering Technology

2 Credits. 1 Lecture Hour. 40 Lab Hours.

Students seeking an associate's degree participate in their second full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 291

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=292subject_code=PSET)

PSET 293 Full-Time Cooperative Education 3: Power Systems Engineering Technology

2 Credits. 1 Lecture Hour. 40 Lab Hours.

Students seeking an associate's degree participate in their third full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 292

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=293subject_code=PSET)

PSET 294 Internship 1: Power Systems Engineering Technology

2 Credits. 1 Lecture Hour. 40 Lab Hours.

Students seeking an associate's degree participate in their first unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: EMET 140

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=294subject_code=PSET)

PSET 295 Internship 2: Power Systems Engineering Technology

2 Credits. 1 Lecture Hour. 40 Lab Hours.

Students seeking an associate's degree participate in their second unpaid field learning experience related to their degree. Students must follow applicable policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: PSET 294

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=295subject_code=PSET)

PSET 298 Second Year Special Topics in Power Systems Engineering Technology

1-9 Credits. 0 Lecture Hour. 0 Lab Hour.

A course on selected topics related to Power Systems Engineering Technology, which gives students opportunities to study information not currently covered in other courses. Grades issued are A, B, C, D, or F.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=298subject_code=PSET)

PSET 299 Second Year Independent Project in Power Systems Engineering Technology

1-9 Credits. 0 Lecture Hour. 0 Lab Hour.

A project related to Power Systems Engineering Technology that is completed by one or more students to meet specific educational goals. Projects must have prior approval and supervision by Power Systems Engineering Technology faculty. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Instructor Approval

View Sections (http://webapps.cincinnatiastate.edu/wwwTools/MCL/default.aspx?course_number=299subject_code=PSET)