NUCLEAR POWER TECHNOLOGY

(CIP 41.0205)

Associate of Applied Science

This program is designed to prepare students for entry-level employment in the nuclear/power generation industry and will provide the academic and technical competencies required. Students can obtain only one AAS degree in one of four specialty areas: Non-Licensed Operator, Electrical Technician, Instrumentation & Control Technician, or Mechanical Technician. Students enrolled in the AAS degree have nuclear core coursework during the first two semesters and must then select a specialty track to complete the final two semesters of the program to complete the AAS degree.

TRACK A: Non-Licensed Operator Specialty

College Readiness Courses (if needed)

Semester I	
NUCP 1371	Math and Chemistry Fundamentals for Nuclear Power
ENGL 1301	Composition I
ENER 1350	Overview of Energy Industry **or**
PTAC 1302	Introduction to Process Technology
MATH 1314	College Algebra **or**
MATH 2412	Pre-Calculus Math

Semester II	
NUCP 1370	Nuclear Fundamentals I
NUCP 1373	Nuclear Fundamentals II
PTAC 1432	Process Instrumentation I
NUCP 1372	Nuclear Power Plant Organization and Processes
CHEM 1405	Introductory Chemistry I **or**
CHEM 1411	General Chemistry I

Semester III	
CETT 1409	DC-AC Circuits
NUCP 2470	Nuclear Power Plant Systems I
PTAC 2314	Principles of Quality
INTC 1350	Digital Measurement and Controls

Social/Behavioral Sciences from the AAS General Education Course List

Semester IV	
NUCP 2471	Nuclear Power Plant Systems II (Capstone Course)
SPCH 1315	Public Speaking

Humanities/Fine Arts from the AAS General Education Course List

Discipline Related Studies Elective*

***Discipline Related Studies Electives**

Choose one from the following:

- PHYS 1401 – College Physics I
- MATH 2413 – Calculus I
- CHEM 1411 – General Chemistry I **or**
  CHEM 1412 – General Chemistry II
- PTAC 2436[1] – Process Instrumentation II
- CETT 1425 – Digital Fundamentals
- ELMT 2437[1] – Electronic Troubleshooting, Service, and Repair
- INTC 1457 – AC/DC Motor Control
- NUCP 1480[2] – Cooperative Education – Nuclear/Nuclear Power Technology/ Technician (Requires Program Director Approval)

Total Semester Hours – 60

[1]Students desiring to pursue the Electrical Technician and/or Instrumentation & Control Technician Level II Certificates **MUST** take ELMT 2437 and/or PTAC 2436 as a Discipline Related Elective to avoid completion delays.

[2]AAS seeking students can take NUCP 1480 for a 16-week semester internship or an 8-week summer internship.

TRACK B: Electrical Technician Specialty

College Readiness Courses (if needed)

Semester I	
NUCP 1371	Math and Chemistry Fundamentals for Nuclear Power
ENGL 1301	Composition I
ENER 1350	Overview of Energy Industry **or**
PTAC 1302	Introduction to Process Technology
MATH 1314	College Algebra **or**
MATH 2412	Pre-Calculus Math

Semester II	
NUCP 1370	Nuclear Fundamentals I
NUCP 1373	Nuclear Fundamentals II
PTAC 1432	Process Instrumentation I
NUCP 1372	Nuclear Power Plant Organization and Processes
CHEM 1405	Introductory Chemistry I **or**
CHEM 1411	General Chemistry I

Semester III	
CETT 1409	DC-AC Circuits
INTC 1350	Digital Measurement and Controls
PTAC 2314	Principles of Quality
ELMT 2437	Electronic Troubleshooting, Service, and Repair

Social/Behavioral Sciences from the AAS General Education Course List

Semester IV	
INTC 1457	AC/DC Motor Control
ELMT 2441	Electromechanical Systems (Capstone Course)
SPCH 1315	Public Speaking

Humanities/Fine Arts from the AAS General Education Course List

Total Semester Hours – 60

TRACK C: Instrumentation & Control Technician Specialty

College Readiness Courses (if needed)

Semester I	
NUCP 1371	Math and Chemistry Fundamentals for Nuclear Power
ENGL 1301	Composition I
ENER 1350	Overview of Energy Industry **or**
PTAC 1302	Introduction to Process Technology
MATH 1314	College Algebra **or**
MATH 2412	Pre-Calculus Math

Semester II	
NUCP 1370	Nuclear Fundamentals I
NUCP 1373	Nuclear Fundamentals II
PTAC 1432	Process Instrumentation I
NUCP 1372	Nuclear Power Plant Organization and Processes
CHEM 1405	Introductory Chemistry I **or**
CHEM 1411	General Chemistry I

Semester III	
CETT 1409	DC-AC Circuits
INTC 1350	Digital Measurement and Controls
PTAC 2314	Principles of Quality
PTAC 2436	Process Instrumentation II

Social/Behavioral Sciences from the AAS General Education Course List

Semester IV	
INTC 1457	AC/DC Motor Control
ELMT 2452	Power Generation Instrumentation (Capstone Course)
SPCH 1315	Public Speaking

Humanities/Fine Arts from the AAS General Education Course List

Total Semester Hours – 60

TRACK D: Mechanical Technician Specialty

College Readiness Courses (if needed)

Semester I	
NUCP 1371	Math and Chemistry Fundamentals for Nuclear Power
ENGL 1301	Composition I
ENER 1350	Overview of Energy Industry **or**
PTAC 1302	Introduction to Process Technology
MATH 1314	College Algebra **or**
MATH 2412	Pre-Calculus Math

Semester II	
NUCP 1370	Nuclear Fundamentals I
NUCP 1373	Nuclear Fundamentals II
PTAC 1432	Process Instrumentation I
NUCP 1372	Nuclear Power Plant Organization and Processes
CHEM 1405	Introductory Chemistry I **or**
CHEM 1411	General Chemistry I

Semester III	
CETT 1409	DC-AC Circuits
INMT 1305	Introduction to Industrial Maintenance
INMT 2303	Pumps, Compressors, and Mechanical Drives
WLDG 1428	Introduction to Shielded Metal Arc Welding (SMAW)

Social/Behavioral Sciences from the AAS General Education Course List

Semester IV	
HYDR 1450	Hydraulics, Fabrication and Repair
MCHN 2403	Fundamentals of Computer Numerical Controlled (CNC) Machine Controls (Capstone Course)
SPCH 1315	Public Speaking

Humanities/Fine Arts from the AAS General Education Course List

Total Semester Hours – 60