

# Programmable Controller (PLC) Certificate



## Engineering Technologies Division

### For Program Questions:

Dan Burklo  
Dean of Engineering Technologies  
(419) 267-1394  
dburklo@northweststate.edu

### For Admissions Questions:

NSCC Admissions Office  
(419) 267-1320  
admissions@northweststate.edu



[www.northweststate.edu](http://www.northweststate.edu)

*NSCC is accredited by:  
The Higher Learning Commission  
(312) 263-0456*

[www.ncahigherlearningcommission.org](http://www.ncahigherlearningcommission.org)

## Programmable Controller (PLC) Certificate

A Programmable Logic Controller (PLC) Certificate prepares the individual to install, maintain and troubleshoot industrial grade Programmable Logic Controllers (PLC) systems. Typically these technicians will work closely with maintenance supervisors and electrical engineers, sometimes receiving objectives and technical advice from them. Technicians conduct extensive self study (reading, research and practice) to improve and maintain technical proficiency, due to new and improved electrical control devices.

Typically technicians work on assignments and tasks with minimum supervision and guidance, often requiring the technician to interface and pass down information between cross function personnel of incoming and outgoing shifts. It is expected by employers that technicians demonstrate excellent verbal, written and interpersonal communication skills.

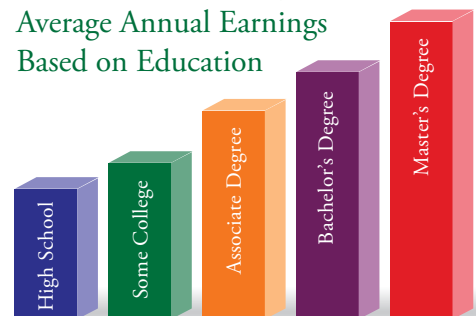
Coursework (100 level or higher) completed in this certificate directly applies toward the associate degree in Automation and Controls.

## Career Outlook

Graduates of this program may find employment as entry-level Control technicians, Electrical technicians or as Service technicians working under the direction of the Maintenance or Engineering department. Some of the typical duties of these Technicians will include: troubleshooting and programming of PLC Control Systems; variable frequency drives; 480 volt 3 phase motor wiring; reading blueprints and electrical schematics; installing conduit and wiring; testing wiring connections; working closely with electrical engineers and / or general contractors.

## Education Pays

Average Annual Earnings  
Based on Education



2011-2012

Based on data from the Bureau of Labor Statistics

# Program Sequence

## First Semester

		<i>Credits</i>
+ IND120	Industrial Electricity I	3
MTH080	Review of Beginning Algebra	4
		7

## Second Semester

		<i>Credits</i>
+ IND121	Industrial Electricity II	3
+ IND110*	Industrial Computing I	3
		6

## Third Semester

		<i>Credits</i>
+ CAD111	CAD I	4
+ IND223	Motors & Motor Controls	3
		7

## Fourth Semester

		<i>Credits</i>
+ PLC200	Programmable Controller I	3
	General Studies Elective	3
		6

## Fifth Semester

		<i>Credits</i>
+ IND221	Instrumentation & Controls	3
+ PLC210	Programmable Controller II	3
		6

## Sixth Semester

		<i>Credits</i>
+ EET240	Engineering Programming	3
+ PLC220	Programmable Controller III	3
		6

**Total Program Credit Hours** **38**

\* Prior to taking IND110, students should have basic computer literacy in Windows and at least one Windows application.

+ Students must attain a minimum grade of "C" in all courses with a '+' to progress in the program and to graduate.

*Course curriculum is subject to change. Please consult with an Academic Advisor for up-to-date information.*



# Programmable Controller

## Department of Engineering Technology

### **PROGRAM NAME & LENGTH**

**Name of Program:** Programmable Controller

**Level of Program:** Certificate

**Program Length:** 3 Semesters

### **RELATED OCCUPATIONS**

**U.S. Department of Labor's Standard Occupational Classification (SOC) code:**

49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment

**Link(s) to the U.S. Department of Labor's O\*Net Occupational Profiles:**

<http://www.onetonline.org/link/summary/49-2094.00>

### **COST:**

**Total Tuition:** \$4,624

**Fees:** \$345

**Total Est. Costs for Books and Supplies:** \$569

### **DEBT AT PROGRAM COMPLETION**

Number of students completing the program between July 1, 2010 and June 30, 2011

**Number of 2010-2011 Graduates:** No 2010-2011 Graduates

For all Students completing program, the median cumulative debt for:

**Federal Student Debt:** No 2010-2011 Graduates

### **PROGRAM COMPLETION IN NORMAL TIME**

**Normal Time in Months to Complete Program:** 12 Months