



**Pioneer Technology Center Career Major
Course Requirements**

IT 76	CM Industrial Maintenance/Mechatronics	1050 Pathway
	IT60 Electrical Distribution	30 Mechatronics
	IT61 Electrical Schematics and Blueprint Reading	30 MN003 - Maintenance, Installation & Repair
	IT62 Power Transmission Principles - Hydraulics	45 CIP 15.0404 SOC 17-3024
	IT63 Power Transmission Principles - Pneumatics	45
	IT64 Industrial Electricity	30
	IT65 Industrial Wiring Methods	75 CERT -3050 - Instrumentation Technician, 3901 - Industrial Maintenance Mechanic, 3902 - Fluid Power Mechanic, 3903 - Electrical/Electronic Mechanic, 3904 - Mechanical Power Transmission Mechanic;
	IT32 Mechanical Power Transmission Theory & Principles	75
	IT66 Motor Theory and Operation	75
	IT67 Programmable Controllers	90
	IT68 Electrical Theory	120
	IT50A Career Readiness A	45
	IT50B Career Readiness B	45
	IT69 Electronic Circuitry	75
	IT70 Automated/Robotic Manufacturing	105
	IT78 Wind Energy or Maintenance Capstone	120
	IT72 Industrial Safety	45
		45 Associate (ESA), Wind Turbine Technician - 2403
	Made Change to course title for FY22	Approved FY22
IT 77	CM Pre-Engineering Technology	1050 Pathway
	IT61 Electrical Schematics and Blueprint Reading	30 Mechatronics
	IT62 Power Transmission Principles - Hydraulics	45 MN003 - Maintenance, Installation & Repair
	IT63 Power Transmission Principles - Pneumatics	45
	IT32 Mechanical Power Transmission Theory & Principles	75 CIP - 15.0404
	IT73 Programmable Controller and Programming	150 SOC Code - 17-3024
	IT68 Electrical Theory	120 CERT - 3902 - Fluid Power Mechanic, 3904 - Mechanical Power Transmission Mechanic;
	IT50A Career Readiness A	45
	IT50B Career Readiness B	45
	IT74 Statics Applications	75
8905	IT56 Fundamentals of Computer Aided Drafting and Design	120
	IT57 Material & Equipment Specifications	45
	IT75 3D Design & Manufacturing	30
	IT69 Electronic Circuitry	75
	IT70 Automated/Robotic Manufacturing	105
	IT72 Industrial Safety	45
		45 Associate (ESA)
		Renewed FY22



**Pioneer Technology Center Career Major
Course Requirements**

Delete FY22

Mechatronics Career Majors and Required Courses

Pathway

Mechatronics

IT07

CM Instrumentation Technician

- IT23A Fluid Power Theory & Power Transmission Principles A
- IT23B Fluid Power Theory & Power Transmission Principles B
- IT27 Industrial Electricity
- IT28 Industrial Electronics
- IT31 Instrumentation & Control I
- IT33 Microprocessor Instrumentation
- IT37 Programmable Controller Programming
- IT44 Basic Electrical theory
- IT46 Digital Electronics for Manufacturing Maintenance
- IT47 Programmable Controller Interfacing
- IT48 Instrumentation & Control II
- IT50 Career Readiness

1050 MN003 - Maintenance,
60 Installation & Repair

60 **Delete FY22**

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90 **CIP - 15.0404**

60 **SOC Code - 17-3029.09**

120 **CERT -3050 - Instrumentation
90 Technician, 3902 - Fluid Power
90 Mechanic, 3903 -**

90 **Electrical/Electronic Mechanic;
90 WorkKeys Career Readiness**

**45 Certificate, 4064 - ESA-1(DC),
45 4065 - ESA(AC), 4066 - ESA-3
(Semi), 4067 - ESA-4 (Digital),
4052 - Electronic System
Associate (ESA)**

**Optional
Tran.
Code**

IT50A Career Readiness A

IT50B Career Readiness B

IT10

CM Industrial Maintenance Technician

- IT17 Electrical Distribution
- IT20 Electrical Schematics and Blueprint Reading
- IT23A Fluid Power Theory & Power Transmission Principles A
- IT23B Fluid Power Theory & Power Transmission Principles B
- IT24 Fundamentals of Manufacturing
- IT27 Industrial Electricity
- IT30 Industrial Wiring Methods
- IT32 Mechanical Power Transmission Theory & Principles
- IT35 Motor Theory and Operation
- IT37 Programmable Controller Programming
- IT39 Lean Manufacturing Concepts
- IT40 Lean Manufacturing Processes
- IT41 Safety in Manufacturing
- IT42 Principles of Welding and Machining for Manufacturing Ma
- IT43 Maintenance Tools and Equipment in Manufacturin
- IT44 Basic Electrical theory
- IT45 Electromechanical Devices and Application
- IT49 Career Readiness

1050 Mechatronics

60 MN003 - Maintenance,
60 Installation & Repair

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60 **Delete FY22**

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60 **CIP - 47.0303**

120 **SOC Code - 49-2094**

75 **CERT - 3901 - Industrial**

30 **Maintenance Mechanic, 3902 -
90 Fluid Power Mechanic, 3904 -
30 Mechanical Power**

60 **Transmission Mechanic;**

30 **WorkKeys Career Readiness
30 Certificate, 4064 - ESA-1(DC),**

30 **4065 - ESA(AC), 4066 - ESA-3
30 (Semi), 4067 - ESA-4 (Digital),**

60 **4052 - Electronic System**

90 **Associate (ESA)**

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**Pioneer Technology Center Career Major
Course Requirements**

IT53 CM Engineering/Process Technology

- IT23A Fluid Power Theory & Power Transmission Principles A
- IT23B Fluid Power Theory & Power Transmission Principles B
- IT24 Fundamentals of Manufacturing
- IT32 Mechanical Power Transmission Theory & Principles
- IT33 Microprocessor Instrumentation
- IT37 Programmable Controller Programming
- IT44 Basic Electrical Theory
- IT46 Digital Electronics for Manufacturing Maintenance
- IT49 Career Readiness
- IT54 Statics
- IT55 Capstone - Academy of Manufacturing Science
- (8905) IT56 Fundamentals of Computer Aided Drafting and Design
- IT57 Material & Equipment Specifications
- IT58 Automated Design & Manufacturing
- IT59 Electronic Circuits

1035 Mechatronics

- 60 MN003 - Maintenance,
- 60 Installation & Repair
- 45 **Delete FY22**
- 75
- 120 **CIP - 15.0404**
- 90 **SOC Code - 17-3029.09**
- 60 **CERT - 3902 - Fluid Power**
- 120 **Mechanic, 3904 - Mechanical**
- 60 **Power Transmission Mechanic;**
- 60 **WorkKeys Career Readiness**
- 60 **Certificate, 4064 - ESA-1(DC),**
- 30 **4065 - ESA(AC), 4066 - ESA-3**
- 120 **(Semi), 4067 - ESA-4 (Digital),**
- 45 **4052 - Electronic System**
- 45 **Associate (ESA)**
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