



**Award of Credit Agreement**  
**Applied Technical Associate's Degree Options**

**Nidec Minster and Edison State Community College** recognize the need to develop a pathway to facilitate the awarding of academic credits by Edison State Community College (ESCC) for technical training conducted by Nidec Minster. The pathway will avoid unnecessary duplication of content and create a seamless transition to the next step in education for Nidec Minster employees to obtain an Associate of Technical Studies (ATS) degree in one of three pathways; Mechanical Design, Electro-Mechanical, or Advanced Manufacturing.

This agreement pertains to Nidec Minster (Nidec) employees who have completed in-house training courses at Nidec.

Students who complete all or a portion of the Nidec training must apply for admission to ESCC and request that the Nidec Talent Development Office send training records to ESCC.

Students who successfully complete courses from the Nidec will be eligible to earn up to but no more than 30 credit hours that will apply to an Associate of Technical Studies degree in Mechanical Design, Electro-Mechanical, or Advanced Manufacturing at ESCC. See pages 2 - 5.

Credit will be applied for Nidec training courses completed and will be awarded in a block of credit hours that will apply to the technical requirement of the ATS degree.

Changes can be requested at any time by notification of either party. This agreement will be reviewed every two (2) years.

3/19/2019

Ben Brigham  
Talent Development Manager  
Nidec Minster

Date

Christopher Spradlin  
Provost  
Edison State Community College

Date

**Nidec Minster and Edison State Community College  
Technical Coursework**

Edison State Community College will provide the remaining 31 or more (as needed) credit hours to obtain the Associate of Technical Studies (ATS) Degree in one of three pathways; Mechanical Design, Electro-Mechanical, or Advanced Manufacturing.

Nidec Minster will provide business-specific technical training courses from the list in each option below. Courses must be completed successfully to count towards credit award.

**MECHANICAL DESIGN OPTION**

**Nidec Minster Courses**

Course Number and Title	Awarded Credits
100/137 Foundational Blueprint Reading and Metrology THORS	2.7
103 Blueprint Reading 2	2.7
134 Engineering Drawings Foundations	0.26
135 Engineering Drawings for Castings	0.19
136 Engineering Drawings for Machining	0.3
100/137 Foundational Blueprint Reading and Metrology THORS	2.7
112 Dimensional Metrology 2	1.5
125 Measurement Concepts	0.26
138 Introduction to Machining THORS	2.7
126 Measurement Tools and Practices	0.41
101 Foundational GD&T Skills and Intro to Machining	2.7
123 GD&T Level 1: ASME Y14.5 2009	2.7
158 GD&T Level 2: ASME Y14.5 2009	2.4
Additional credits from the Advanced Manufacturing courses	8
<b>Total</b>	<b>30</b>

CREDITS GRANTED FROM COMPLETING NIDEC MINSTER TRAINING PROGRAM  
Total 30

-AND-

**Edison State Courses**

EGR 110S Print Reading and Sketching	2
ELT 110S Circuits I	3
MFG 114S Survey of Manufacturing Processes	4
MFG 120S Materials Technology	3
MET 130S Auto CAD I	3
EGR 240S Analytical Troubleshooting	3
<b>Total</b>	<b>18</b>
<b>Grand Total</b>	<b>48</b>

- OR -

## ELECTRO-MECHANICAL OPTION

### Nidec Minster Courses

Course Number and Title	Awarded Credits	
196	Tire Fundamentals: Pneumatic	0.45
205	Hydraulic Systems 1: Basic	2.7
206	Hydraulic Systems 2: Intermediate	2.7
207	Hydraulic Systems 3: Advanced	1.9
208	Hydraulic Systems 4: Electro-Fluid Power Systems	3.2
209	Hydraulic Troubleshooting	3.8
221	Pneumatic Systems 1	1.9
222	Pneumatic Systems 2	1.8
223	Pneumatic Systems 3	1.9
224	Pneumatic Troubleshooting	2.4
133	Wire Harness Fundamentals	0.23
180	Electrical Power Introduction	0.04
210	Industrial Electricity 1	2.7
211	Industrial Electricity 2	2.1
212	Industrial Electricity 3	2.7
213	Industrial Electricity 4	1.8
214	Industrial Electricity 5	2.4
215	Industrial Electricity 6	3.8
121	Central Lubrication	8.44
131	Bearing Fundamentals	0.19
144	Engine Fundamentals: Internal Combustion	0.34
176	Belt Classifications: Round and Flat Belts	0.04
177	Belt Classifications: V Belts	0.04
178	Belt Classifications: Poly V Belts	0.04
179	Belt Classifications: Synchronous Belts	0.04
181	Gears: Spur and Helical Gear Terminology	0.04
182	Gear Classifications and Term: Bevels and Hypoid Gears	0.26
183	Gear Classifications and Term: Spur and Helical Gears	0.26
184	Gear Classifications and Term: Worm and Worm Wheels	0.19
185	Gear Fundamentals	0.3
186	Gear Manufacturing: Bevel and Hypoid Gears	1
187	Gear Manufacturing: Worm and Worm Wheels	1.1
188	Gear Manufacturing: Spur and Helical Gears	1.1
197	Transmission Fundamentals: Automatic	0.15
217	Mechanical Drives 1	2.7
218	Mechanical Drives 2	3.9
219	Mechanical Drives 3	4.35
220	Mechanical Drives 4	2.25
	Total	66

CREDITS GRANTED FROM COMPLETING NIDEC MINSTER TRAINING PROGRAM

Total 30

-AND-

### Edison State Courses

EGR 240S	Analytical Troubleshooting	3
MFG 110S	Metrology	3
MFG 114S	Survey of Manufacturing Process	4
MFG 120S	Materials Technology	3
IMT 112S	Environmental Health and Safety	3
	Total	16
	<b>Grand Total</b>	<b>46</b>

-OR-

## ADVANCED MANUFACTURING OPTION

### Nidec Minster Courses

Course Number and Title	Awarded Credits
101 Foundational GD&T Skills and Intro to Machining	2.7
102 Introduction to CNC Machining	2.7
107 CNC Milling Machines 1-Conversational	2.7
108 CNC Machining Center-Programming, Setup, and Operation	2.7
106 Vertical Milling Machines (Manual)	2.7
127 Fixturing Fundamentals for Machining	0.15
128 Turning Fundamentals: Entry Level	0.3
129 Grinding Fundamentals: Cylindrical	0.45
141 Plating Fundamentals: Metal	0.23
142 Turning Fundamentals: Intermediate Level	0.45
150 Bonded Sand Molding	1.95
151 Bonded Sand: Horizontally Parted Molds	0.04
152 Bonded Sand: Mold Patterns	0.04
154 Castings: High Pressure Die Castings	0.86
155 Castings: Lost Foam Castings	0.83
156 Castings: Low Pressure Die Castings	0.86
161 Bonded Sand: Vertically Parted Molds	0.04
162 Castings: Non-Bonded Sand Molding	0.15
163 Castings: Gravity Die Castings	0.83
164 Castings: Centrifugal Castings	0.83
167 Castings: Investment Castings	1
168 Aluminum Casting Fundamentals	0.6
169 Green Sand Systems	1.95
170 Ductile Iron Fundamentals Part 1	0.4
171 Ductile Iron Fundamentals Part 2	0.4
172 Gray Iron Fundamentals	0.45
173 Cupola Furnace Fundamentals	0.45
174 Cupola Furnace Operations	0.3
175 Foundry Cleaning Room	0.4
189 Heat Treating Fundamentals of Ferrous Metals	0.45
191 Forging Fundamentals: Closed Die	0.4
195 Quality Inspection of Steel Castings	0.11
139 Introduction to Turning and Grinding THORS	2.7
193 Polymer Fundamentals	0.3
132 Stamping Fundamentals	0.3
124 Machining Foundation	6.4
194 Steel Fundamentals	0.3
Total	42

### CREDITS GRANTED FROM COMPLETING NIDEC MINSTER TRAINING PROGRAM

Total 30

-AND-

### Edison State Courses

MET 130S Auto CAD I	3
EGR 240S Analytical Troubleshooting	3
IMT 244S Lean Systems	4
MGT 223S Project Management	3
MFG 120S Materials Technology	3
Total	16
<b>Grand Total</b>	<b>46</b>

ALL DEGREE PATHWAYS MUST COMPLETE THE FOLLOWING GENERAL

EDUCATIONAL REQUIREMENTS (course substitutions allowed):

**Edison State Courses**

ENG 121S English Composition I	3
COM 121S Fundamentals of Communication	3
MTH 123S Trigonometry	3
Soc/Behavioral Science Elective	3
Humanities Elective	3
Total	15

**TOTAL DEGREE CREDITS:**

<b>A.T.S., MECHANICAL DESIGN</b>	<b>63</b>
<b>A.T.S., ELECTRO-MECHANICAL</b>	<b>61</b>
<b>A.T.S., ADVANCED MANUFACTURING</b>	<b>61</b>