

### Instrumentation and Control Technician RSOS (2020)

2013 NOA Structure		Moved to:	2020 RSOS STRUCTURE		Came From:
<b>BLOCK A</b>	<b>COMMON OCCUPATIONAL SKILLS</b>		<b>MWA A</b>	<b>PERFORMS COMMON OCCUPATIONAL SKILLS</b>	
<b>Task 1</b>	<b>Performs safety-related functions.</b>	<b>Task 1</b>	<b>Task 1</b>	<b>Performs safety-related functions</b>	<b>Task 1</b>
1.01	Maintains safe work environment.	1.01	1.01	Maintains safe work environment	1.01
1.02	Uses personal protective equipment (PPE) and safety equipment.	1.02	1.02	Uses personal protective equipment (PPE) and safety equipment	1.02
1.03	Performs de-energizing, lock-out and tag-out procedures.	1.03	1.03	Performs de-energizing, lock-out and tag-out procedures	1.03
<b>Task 2</b>	<b>Organizes work</b>	<b>Task 3</b>	<b>Task 2</b>	<b>Uses tools and equipment</b>	New
2.01	Uses drawings and schematics.	3.02	2.01	Uses calibration, configuration and test equipment	3.01
2.02	Plans tasks.	3.03	2.02	Uses hand and power tools	3.02
			2.03	Uses access equipment	new
<b>Task 3</b>	<b>Performs routine trade activities</b>	<b>Task 2</b>	<b>2.04</b>	<b>Uses rigging, hoisting and lifting equipment</b>	3.04
3.01	Maintains calibration, configuration and test equipment.	2.01			
3.02	Maintains tools.	2.02	<b>Task 3</b>	<b>Organizes work</b>	<b>Task 2</b>
3.03	Maintains documentation	3.01	3.01	Uses documentation	3.03
3.04	Operates material handling equipment.	2.04	3.02	Interprets drawings and schematics	2.01
			3.03	Plans tasks	2.02
			<b>Task 4</b>	<b>Uses communication and mentoring techniques</b>	<b>NEW</b>
			4.01	Uses communication techniques	new
			4.02	Uses mentoring techniques	new
<b>BLOCK B</b>	<b>PROCESS MEASURING AND INDICATING DEVICES</b>		<b>MWA B</b>	<b>INSTALLS AND SERVICES PROCESS MEASURING AND INDICATING DEVICES</b>	
<b>Task 4</b>	<b>Installs and services pressure, temperature, level and flow devices.</b>	<b>Task 5</b>	<b>Task 5</b>	<b>Installs and services pressure, temperature, level and flow devices</b>	<b>Task 4</b>
4.01	Installs pressure, temperature, level and flow devices.	5.01	5.01	Installs pressure, temperature, level and flow devices	4.01
4.02	Maintains pressure, temperature, level and flow devices.	5.02	5.02	Maintains pressure, temperature, level and flow devices	4.02
4.03	Diagnoses pressure, temperature, level and flow devices.	5.03	5.03	Diagnoses pressure, temperature, level and flow devices	4.03
4.04	Repairs pressure, temperature, level and flow devices.	5.04	5.04	Repairs pressure, temperature, level and flow devices	4.04
<b>Task 5</b>	<b>Installs and services motion, speed, position and vibration devices.</b>	<b>Task 7</b>	<b>Task 6</b>	<b>Installs and services signal transducers</b>	<b>NEW</b>
5.01	Installs motion, speed, position and vibration devices.	7.01	6.01	Performs installation and configuration of signal transducers	new
5.02	Maintains motion, speed, position and vibration devices.	7.02	6.02	Diagnoses signal transducers	new
5.03	Diagnoses motion, speed, position and vibration devices.	7.03	6.03	Performs maintenance and repairs on signal transducers	new
5.04	Repairs motion, speed, position and vibration devices.	7.04			
<b>Task 6</b>	<b>Installs and services mass, density and consistency devices.</b>	<b>Task 8</b>	<b>Task 7</b>	<b>Installs and services motion, speed, position and vibration devices</b>	<b>Task 5</b>
6.01	Installs mass, density and consistency devices.	8.01	7.01	Installs motion, speed, position and vibration devices	5.01
6.02	Maintains mass, density and consistency devices.	8.02	7.02	Maintains motion, speed, position and vibration devices	5.02
6.03	Diagnoses mass, density and consistency devices.	8.03	7.03	Diagnoses motion, speed, position and vibration devices	5.03
6.04	Repairs mass, density and consistency devices.	8.04	7.04	Repairs motion, speed, position and vibration devices	5.04
			<b>Task 8</b>	<b>Installs and services mass, density and consistency devices</b>	<b>Task 6</b>

<b>Task 7</b>	<b>Installs and services process analyzers.</b>	Task 9	8.01	Installs mass, density and consistency devices	6.01
7.01	Installs process analyzers.	9.01	8.02	Maintains mass, density and consistency devices	6.02
7.02	Maintains process analyzers.	9.02	8.03	Diagnoses mass, density and consistency devices	6.03
7.03	Diagnoses process analyzers.	9.03	8.04	Repairs mass, density and consistency devices	6.04
7.04	Repairs process analyzers.	9.04			
			<b>Task 9</b>	<b>Installs and services process analyzers</b>	<b>Task 7</b>
<b>Task 8</b>	<b>Installs and services multiple variable computing devices.</b>	Task 10	9.01	Installs process analyzers	7.01
8.01	Installs multiple variable computing devices.	10.01	9.02	Maintains process analyzers	7.02
8.02	Maintains multiple variable computing devices.	10.02	9.03	Diagnoses process analyzers	7.03
8.03	Diagnoses multiple variable computing devices.	10.03	9.04	Repairs process analyzers	7.04
8.04	Repairs multiple variable computing devices.	10.04			
			<b>Task 10</b>	<b>Installs and services multiple variable computing devices</b>	<b>Task 8</b>
<b>BLOCK C</b>	<b>SAFETY AND SECURITY SYSTEMS AND DEVICES</b>		10.01	Installs multiple variable computing devices	8.01
<b>Task 9</b>	<b>Installs and services safety systems and devices.</b>	Task 11	10.02	Maintains multiple variable computing devices	8.02
9.01	Installs safety systems and devices.	11.01	10.03	Diagnoses multiple variable computing devices	8.03
9.02	Maintains safety systems and devices.	11.02	10.04	Repairs multiple variable computing devices	8.04
9.03	Diagnoses safety systems and devices.	11.03			
9.04	Repairs safety systems and devices.	11.04	<b>MWA C</b>	<b>INSTALLS AND SERVICES SAFETY AND SECURITY SYSTEMS AND DEVICES</b>	
			<b>Task 11</b>	<b>Installs and services safety systems and devices</b>	<b>Task 9</b>
<b>Task 10</b>	<b>Installs and services facility security systems. (Not Common Core)</b>	<b>Task 12</b>	11.01	Installs safety systems and devices	9.01
10.01	Installs facility security systems.	12.01	11.02	Maintains safety systems and devices	9.02
10.02	Maintains facility security systems.	12.02	11.03	Diagnoses safety systems and devices	9.03
10.03	Diagnoses facility security systems.	12.03	11.04	Repairs safety systems and devices	9.04
10.04	Repairs facility security systems.	12.04			
			<b>Task 12</b>	<b>Installs and services facility security systems (NOT COMMON CORE)</b>	<b>Task 10</b>
<b>Task 11</b>	<b>Installs and services safety instrumented systems (SISs).</b>	<b>Task 13</b>	12.01	Installs facility security systems	10.01
11.01	Installs SISs	13.01	12.02	Maintains facility security systems	10.02
11.02	Configures SISs.	13.02	12.03	Diagnoses facility security systems	10.03
11.03	Maintains SISs.	13.03	12.04	Repairs facility security systems	10.04
11.04	Diagnoses SISs.	13.04			
11.05	Repairs SISs	13.05	<b>Task 13</b>	<b>Installs and services safety instrumented systems (SIS)</b>	<b>Task 11</b>
			13.01	Installs SIS	11.01
<b>BLOCK D</b>	<b>HYDRAULIC, PNEUMATIC AND ELECTRICAL SYSTEMS</b>	<b>MWA D</b>	13.02	Configures SIS	11.02
<b>Task 12</b>	<b>Installs and services control devices for hydraulic systems.</b>	<b>Task 14</b>	13.03	Maintains SIS	11.03
12.01	Installs control devices for hydraulic systems.	14.01	13.04	Diagnoses SIS	11.04
12.02	Maintains control devices for hydraulic systems.	14.02	13.05	Repairs SIS	11.05
12.03	Diagnoses control devices and hydraulic systems.	14.03			
12.04	Repairs control devices for hydraulic equipment.		<b>MWA D</b>	<b>INSTALLS AND SERVICES HYDRAULIC, PNEUMATIC AND ELECTRICAL SYSTEMS</b>	
			<b>Task 14</b>	<b>Installs and services control devices for hydraulic systems</b>	<b>Task 12</b>
<b>Task 13</b>	<b>Installs and services pneumatic equipment.</b>	Task 15	14.01	Installs control devices for hydraulic systems	12.01
13.01	Installs pneumatic equipment.	15.01	14.02	Diagnoses control devices and hydraulic systems	12.03
13.02	Maintains pneumatic equipment.	15.03	14.03	Performs maintenance and repairs on control devices for hydraulic systems	12.02 and 12.04
13.03	Diagnoses pneumatic equipment	15.02			

13.04	Repairs pneumatic equipment.	15.03	<b>Task 15</b>	<b>Installs and services pneumatic equipment</b>	<b>Task 13</b>
			15.01	Installs pneumatic equipment	13.01
<b>Task 14</b>	<b>Installs and services electrical and electronic equipment.</b>	<b>Task 16</b>	15.02	Diagnoses pneumatic equipment	13.02
14.01	Installs electrical and electronic equipment.	16.01	15.03	Performs maintenance and repairs on pneumatic equipment	13.02 and 13.04
14.02	Maintains electrical and electronic equipment.	16.03			
14.03	Diagnoses electrical and electronic equipment.	16.02	<b>Task 16</b>	<b>Installs and services electrical and electronic equipment</b>	<b>Task 14</b>
14.04	Repairs electrical and electronic equipment.	16.03	16.01	Installs electrical and electronic equipment	14.01
			16.02	Diagnoses electrical and electronic equipment	14.03
<b>BLOCK E</b>	<b>FINAL CONTROL DEVICES</b>		16.03	Performs maintenance and repairs for electrical and electronic equipment	14.02 and 14.04
<b>Task 15</b>	<b>Installs and services valves.</b>	<b>Task 17</b>			
15.01	Installs valves.	17.01	<b>MWA E</b>	<b>INSTALLS, CONFIGURES AND SERVICES FINAL CONTROL ELEMENTS</b>	
15.02	Maintains valves.	17.02	<b>Task 17</b>	<b>Installs and services valves</b>	<b>Task 15</b>
15.03	Diagnoses valves.	17.03	17.01	Installs valves	15.01
15.04	Repairs valves.	17.04	17.02	Maintains valves	15.02
			17.03	Diagnoses valves	15.03
<b>Task 16</b>	<b>Installs and services actuators.</b>	<b>Task 18</b>	17.04	Repairs valves	15.04
16.01	Installs actuators.	18.01			
16.02	Maintains actuators.	18.02	<b>Task 18</b>	<b>Installs and services actuators</b>	<b>Task 16</b>
16.03	Diagnoses actuators.	18.03	18.01	Installs actuators	16.01
16.04	Repairs actuators.	18.04	18.02	Maintains actuators	16.02
			18.03	Diagnoses actuators	16.03
<b>Task 17</b>	<b>Installs and services positioners.</b>	<b>Task 19</b>	18.04	Repairs actuators	16.04
17.01	Installs positioners.	19.01			
17.02	Maintains positioners.	19.02	<b>Task 19</b>	<b>Installs and services positioners</b>	<b>Task 17</b>
17.03	Diagnoses positioners.	19.03	19.01	Installs positioners	17.01
17.04	Repairs positioners.	19.04	19.02	Maintains positioners	17.02
			19.03	Diagnoses positioners	17.03
<b>Task 18</b>	<b>Configures and services variable speed drives (VSDs).</b>	<b>Task 20</b>	19.04	Repairs positioners	17.04
18.01	Configures VSDs.	20.01			
18.02	Maintains VSDs.	20.02	<b>Task 20</b>	<b>Configures and services variable speed drives (VSD)</b>	<b>Task 18</b>
18.03	Diagnoses VSDs.	20.03	20.01	Configures VSD	18.01
18.04	Repairs VSDs.	20.04	20.02	Maintains VSD	18.02
			20.03	Diagnoses VSD	18.03
<b>BLOCK F</b>	<b>COMMUNICATION SYSTEMS AND DEVICES</b>		20.04	Repairs VSD	18.04
<b>Task 19</b>	<b>Installs and services control network systems.</b>	<b>Task 21</b>			
19.01	Performs installation and configuration on control network systems.	21.01	<b>MWA F</b>	<b>INSTALLS AND SERVICES COMMUNICATION SYSTEMS AND DEVICES</b>	
19.02	Diagnoses control network systems.	21.02	<b>Task 21</b>	<b>Installs and services control network systems</b>	<b>Task 19</b>
19.03	Performs maintenance and repairs on control network systems.	21.03	21.01	Performs installation and configuration on control network systems	19.01
			21.02	Diagnoses control network systems	19.02
<b>Task 20</b>	<b>Installs and services signal converters.</b>	<b>Task 22</b>	21.03	Performs maintenance and repairs on control network systems	19.03
20.01	Performs installation and configuration of signal converters.	22.01			
20.02	Diagnoses signal converters.	22.02	<b>Task 22</b>	<b>Installs and services signal converters</b>	<b>Task 20</b>
20.03	Performs maintenance and repairs on signal converters.	22.03	22.01	Performs installation and configuration of signal converters	20.01
			22.02	Diagnoses signal converters	20.02

<b>Task 21</b>	<b>Installs and services gateways, bridges and media converters.</b>	<b>Task 23</b>	22.03	Performs maintenance and repairs on signal converters	20.03
21.01	Performs installation and configuration of gateways, bridges and media converters.	23.01			
21.02	Diagnoses gateways, bridges and media converters.	23.02	<b>Task 23</b>	<b>Installs and services gateways, bridges and media converters</b>	<b>Task 21</b>
21.03	Performs maintenance and repairs on gateways, bridges and media converters.	23.03	23.01	Performs installation and configuration of gateways, bridges and media converters	21.01
			23.02	Diagnoses gateways, bridges and media converters	21.02
<b>BLOCK G</b>	<b>CONTROL SYSTEMS AND PROCESS CONTROL</b>		23.03	Performs maintenance and repairs on gateways, bridges and media converters	21.03
<b>Task 22</b>	<b>Establishes and optimizes process control strategies.</b>	<b>Task 24</b>			
22.01	Determines process control strategy.	24.01	<b>MWA G</b>	<b>INSTALLS AND SERVICES CONTROL SYSTEMS AND PROCESS CONTROL</b>	
22.02	Optimizes process control.	24.02	<b>Task 24</b>	<b>Establishes and optimizes process control strategies</b>	<b>Task 22</b>
			24.01	Determines process control strategy	22.01
<b>Task 23</b>	<b>Installs and services stand-alone controllers (SACs).</b>	<b>Task 25</b>	24.02	Optimizes process control	22.02
23.01	Installs SACs.	25.01			
23.02	Configures SACs.	25.02	<b>Task 25</b>	<b>Installs and services stand-alone controllers (SAC)</b>	<b>Task 23</b>
23.03	Performs maintenance, diagnostics and repairs on SACs.	25.03	25.01	Installs SAC	23.01
			25.02	Configures SAC	23.02
<b>Task 24</b>	<b>Installs and services programmable logic controllers (PLCs).</b>	<b>Task 26</b>	25.03	Performs maintenance, diagnostics and repairs on SAC	23.03
24.01	Installs PLCs.	26.01			
24.02	Configures PLCs.	26.02	<b>Task 26</b>	<b>Installs and services programmable logic controllers (PLC)</b>	<b>Task 24</b>
24.03	Performs maintenance, diagnosis and repairs on PLCs.	26.03	26.01	Installs PLC	24.01
			26.02	Configures PLC	24.02
<b>Task 25</b>	<b>Installs and services distributed control systems (DCSs).</b>	<b>Task 26</b>	26.03	Performs maintenance, <b>diagnostics</b> and repairs on PLC	24.03
25.01	Installs DCSs.	26.01			
25.02	Configures DCSs.	26.02	<b>Task 27</b>	<b>Installs and services distributed control systems (DCS)</b>	<b>Task 25</b>
25.03	Performs maintenance, diagnosis and repairs on DCSs.	26.03	27.01	Installs DCS	25.01
			27.02	Configures DCS	25.02
<b>Task 26</b>	<b>Installs and services human machine interface (HMI).</b>	<b>Task 28</b>	27.03	Performs maintenance, <b>diagnostics</b> and repairs on DCS	25.03
26.01	Installs HMIs.	28.01			
26.02	Configures HMIs.	28.02	<b>Task 28</b>	<b>Installs and services human machine interface (HMI)</b>	<b>Task 26</b>
26.03	Performs maintenance, diagnosis and repairs on HMIs.	28.03	28.01	Installs HMI	26.01
			28.02	Configures HMI	26.02
<b>Task 27</b>	<b>Installs and services Supervisory Control and Data Acquisition (SCADA) systems.</b>	<b>Task 29</b>	28.03	Performs maintenance, <b>diagnostics</b> and repairs on HMI	26.03
27.01	Installs SCADA systems.	29.01			
27.02	Configures SCADA systems.	29.02	<b>Task 29</b>	<b>Installs and services supervisory control and data acquisition (SCADA) systems</b>	<b>Task 27</b>
27.03	Performs maintenance, diagnosis and repairs on SCADA systems.	29.03	29.01	Installs SCADA systems	27.01
			29.02	Configures SCADA systems	27.02
			29.03	Performs maintenance, diagnostics and repairs on SCADA systems	27.03