

**10-631-2 AUTOMATION FOR INDUSTRIAL SYSTEMS  
31-631-1 INDUSTRIAL SYSTEMS SPECIALIST  
2025-26 REQUIRED COURSES  
NORTHWOOD TECHNICAL COLLEGE  
NEW RICHMOND**



Name/ID \_\_\_\_\_

Date \_\_\_\_\_

CATALOG NUMBER	COURSE TITLE	*HOURS PER WEEK	CREDITS	IT - NETWORK TECHNICIAN DIPLOMA <i>(30-150-4)</i>	INDUSTRIAL SYSTEMS SPECIALIST TECHNICAL DIPLOMA	AUTOMATION FOR INDUSTRIAL SYSTEMS ASSOCIATE DEGREE	DATE COMPLETED	TRANSFER OR GRADE
<b>FIRST TERM - FALL 2025</b>								
10150111	Cisco CCNA 1 Introduction to Networks	5 hours per week	3 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10150139	IT Essentials and Security	3 hours per week	2 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10154149	Windows Operating Systems	4 hours per week	3 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10605167	Electricity 1 Corequisite: 10804113 College Technical Mathematics 1A	3 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631100	Introduction to Process Control	2 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10804113	College Technical Mathematics 1A	3 hours per week	3 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
	<b>FIRST TERM TOTAL</b>	20 hours per week		<b>8 Credits</b> IT - NETWORK TECHNICIAN	<b>4 Credits</b> INDUSTRIAL SYSTEMS SPECIALIST	<b>15 Credits</b> AUTOMATION FOR INDUSTRIAL SYSTEMS		

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<b>SECOND TERM - SPRING 2026</b>								
10150113	Cisco CCNA 2 Routing and Switching Essentials Prerequisite: 10150111 Cisco CCNA 1 Introduction to Networks	4 hours per week	3 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10150117	Server Administration 1 Prerequisite: 10154149 Windows Operating Systems	4 hours per week	3 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10154103	Linux Operating Systems Prerequisite: 10154149 Windows Operating Systems	4 hours per week	3 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10605168	Electricity 2 Prerequisite: 10605167 Electricity 1	3 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10150170	Coding with Python	3 hours per week	2 credits	IT - NETWORK TECHNICIAN		AUTOMATION FOR INDUSTRIAL SYSTEMS		
10801136	English Composition 1	3 hours per week	3 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
	<b>SECOND TERM TOTAL</b>	21 hours per week		<b>11 Credits</b> IT-NETWORK TECHNICIAN	<b>2 Credits</b> INDUSTRIAL SYSTEMS SPECIALIST	<b>16 Credits</b> AUTOMATION FOR INDUSTRIAL SYSTEMS		

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<b>THIRD TERM - FALL 2026</b>								
10631102	Industrial Power Electronics Prerequisite: 10605167 Electricity 1	4 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631103	Process Control and Instrumentation Prerequisite: 10605167 Electricity 1 and Corequisite: 10631100 Introduction to Process Control	6 hours per week	3 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631108	PLC Programming and Interfacing Prerequisite: 10605167 Electricity 1	5 hours per week	3 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631109	Industrial AC, Motor Control, and Pilot Devices Prerequisite: 10605168 Electricity 2 or equivalent	5 hours per week	3 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10801196 or 10801198	Oral/Interpersonal Communication or Speech	3 hours per week	3 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
10804114	College Technical Mathematics 1B Prerequisite: 10804113 College Technical Mathematics 1A	2 hours per week	2 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
10809198	Introduction to Psychology	3 hours per week	3 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
	<b>THIRD TERM TOTAL</b>	28 hours per week			<b>11 Credits</b> INDUSTRIAL SYSTEMS SPECIALIST	<b>19 Credits</b> AUTOMATION FOR INDUSTRIAL SYSTEMS		

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<b>FOURTH TERM - SPRING 2027</b>								
10631104	Smart Instruments Prerequisite: 10631100 Introduction to Process Control	3 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631105	Industrial Networks and Communication Busses Corequisite: 10631110 Advanced PLC Programming and Interfacing	3 hours per week	2 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631106	Supervisory and Distributed Control Systems Prerequisites: 10631100 Introduction to Process Control and 10631108 PLC Programming and Interfacing	6 hours per week	3 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631107	Industrial Automation Case Project Prerequisites: 10631100 Introduction to Process Control; 10631102 Industrial Power Electronics; 10631103 Process Control and Instrumentation; 10631108 PLC Programming and Interfacing; and 10631109 Industrial AC, Motor Control, and Pilot Devices	2 hours per week	1 credit		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10631110	Advanced PLC Programming and Interfacing Prerequisite: 10631108 PLC Programming and Interfacing	5 hours per week	3 credits		INDUSTRIAL SYSTEMS SPECIALIST	AUTOMATION FOR INDUSTRIAL SYSTEMS		
10809166 or 10809172 or 10809195	Introduction to Ethics: Theory and Application or Introduction to Diversity Studies or Economics	3 hours per week	3 credits			AUTOMATION FOR INDUSTRIAL SYSTEMS		
	<b>FOURTH TERM TOTAL</b>	22 hours per week			11 Credits INDUSTRIAL SYSTEMS SPECIALIST	14 Credits AUTOMATION FOR INDUSTRIAL SYSTEMS		
	<b>TOTAL CREDITS</b>			<b>19 CREDITS</b> IT - NETWORK TECHNICIAN	<b>28 CREDITS</b> INDUSTRIAL SYSTEMS SPECIALIST	<b>64 CREDITS</b> AUTOMATION FOR INDUSTRIAL SYSTEMS		



\*Hours per week represents periods of instruction and/or work-based learning hours per week (class hours). Additional time may be required outside of class to complete assignments. For more details on what you can expect outside of class, please see the "Expectations Outside of the Classroom" section of the Student Handbook.

Industrial Systems Specialist: Courses with a prerequisite and corequisite will require overrides by the Dean of Academic Programs.

1st and 3rd terms are taught concurrently  
2nd and 4th terms are taught concurrently

#### NORTHWOOD TECH GENERAL EDUCATION COURSE OPTIONS FOR NORTHWOOD TECH ASSOCIATE DEGREE PROGRAMS

Co-enrollment in 99831900 Writing Essentials may be recommended in addition to English Composition 1.

Specific General Education courses are scheduled as requirements for this program. If you have completed General Education coursework at another Wisconsin technical college, please refer to the Acceptable Transfer Course document at the following link (find your program) to see if your previous coursework will transfer

[Acceptable Transfer Courses](#)

If you have completed General Education coursework at Northwood Tech in a prior term, the same options will apply for your program requirements. Pending Dean approval, technical diploma coursework (i.e. catalog number beginning with 30, 31, or 32) may also be allowed to meet General Education requirements. NOTE: Technical diploma level coursework may not transfer to a baccalaureate program.<sup>^</sup>

*GRADUATION REQUIREMENTS: Although your academic advisor can provide guidance, you are ultimately responsible for selecting courses that meet a program's graduation requirements. If you do not take courses in the recommended sequence above, it may delay your completion of graduation requirements. A program plan grade point average (GPA) of 2.0 in a 4.0 grade system is required to graduate.*

EARN CREDIT FOR WHAT YOU ALREADY KNOW:

[Visit Credit for Prior Learning for more information](#)

If you have difficulty accessing this content or notice any accessibility problems, please contact the Northwood Tech Curriculum Office at [curriculum.office@NorthwoodTech.edu](mailto:curriculum.office@NorthwoodTech.edu) or 715.752.8128. You will receive a response within 5 business days.

<sup>^</sup>If considering transferring into a baccalaureate program, please work with the Transfer Coordinator at the college you are interested in transferring to verify status, including if technical diploma level coursework will transfer and if it will transfer, how the credits will be brought in to your future degree.