

PROGRAM ASSESSMENT PLAN CHANGE FORM

Program Code: CVAMSP	Program Title: Automation Specialist	Effective Term: Fall 2023
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List the outcome(s) to be revised, and identify changes (add rows as needed):

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Course/other populations	Number of students to be assessed
1. Install and troubleshoot PLC communication.	1. Outcome-related departmental exam questions 2. Outcome-related lab quizzes	Fall 2025	All sections of ELE 254	All students
2. Demonstrate knowledge of machine axis and basic operation of manufacturing equipment.	Student achievement checklist	Fall 2025	All sections of NCT 100	All students
The above outcome will be replacing the previous outcome #2 which was going to be evaluated in NCT 110. NCT 101 & 110 were replaced with NCT 120 to allow for the Automation Specialist Advanced Certificate to be fully embedded within the Mechatronics Associates Degree. Because this Certificate follows the Robotic Technician Certificate we are assessing their expanded knowledge of automation (ELE 254), there knowledge of machine tools (NCT 100), and there knowledge of fluid power (MEC 105).				
3. Build a circuit from a schematic.	Lab Exercise	Fall 2025	All sections of MEC 105	All students

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, answer key, checklist, other). Please attach rubric if available.

Outcome-related questions on departmental exams will be scored using an answer key
 Student achievement checklist
 Lab exercise and outcome-related projects will be scored using a rubric.

2. Indicate the standard of success to be used for this assessment:




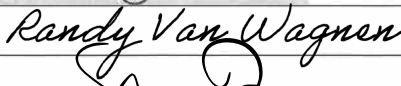
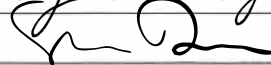
Outcome #1: 70 % of students will score 70% or higher.
 Outcome #2: 70% of all students will score 70% or higher.
 Outcome #3: 70% of the students will score 70% (7 of 10) or higher.

3. Indicate who will score and analyze the data:

Departmental faculty

PROGRAM ASSESSMENT PLAN CHANGE FORM

Signatures:

Reviewer	Print Name	Signature	Date
Initiator	Sean Martin		1/19/23
Department Chair	Al Coleman		2/4/23
Division Dean/Administrator	Dr. Jimmie Barber		3/21/2023
Please return completed form to the Office of Curriculum & Assessment, SC 257 or by e-mail to curriculum.assessment@wccnet.edu			
Curriculum Committee Chair	Randy Van Wagnen		4/7/2023
Assessment Committee Chair	Shawn Deron		4/14/2023

Do not write in shaded area. Entered in: Banner C&A Database Log File

Reviewed by C&A Committees 3/30/23

Washtenaw Community College

PROGRAM PROPOSAL FORM

Preliminary Approval – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.

Final Approval – Check here when completing this form after the Vice President for Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

<p>Program Name:</p> <p>Division and Department:</p> <p>Type of Award:</p> <p>Effective Term/Year:</p> <p>Initiator:</p>	<p><u>Automation Specialist</u></p> <p><u>ATP – Advanced Manufacturing</u></p> <p><input type="checkbox"/> AA <input type="checkbox"/> AS <input type="checkbox"/> AAS <input type="checkbox"/> Cert. <input checked="" type="checkbox"/> Adv. Cert. <input type="checkbox"/> Post-Assoc. Cert. <input type="checkbox"/> Cert. of Comp.</p> <p><u>Fall 2022</u></p> <p><u>Allan Coleman</u></p>	<p>Program Code: CVAMSP</p> <p>CIP Code: <u>15.0406</u></p>
<p>Program Features Program's purpose and its goals.</p> <p>Criteria for entry into the program, along with projected enrollment figures.</p> <p>Connection to other WCC programs, as well as accrediting agencies or professional organizations.</p> <p>Special features of the program.</p>	<p>This embedded certificate will allow students to obtain WCC credentials on the way to obtaining an AAS Mechatronics degree. This certificate supplements the skills to those obtained through the robotic technician certificate. There were no certificates specific to automation.</p>	
<p>Need</p> <p>Need for the program with evidence to support the stated need.</p>	<p>Our program did not have any robotics certificates other than the AAS. This certificate allows students to obtain more skills with a WCC credential for entering into the field as an automation specialist working on automated systems and robotics.</p>	
<p>Program Outcomes/Assessment</p> <p>State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program.</p> <p>Include assessment methods that will be used to determine the effectiveness of the program.</p>	<p><u>Outcomes</u></p> <ol style="list-style-type: none"> Install and troubleshoot PLC communication. Set up and operate lathe and mill machining centers. Build a circuit from a schematic. 	<p><u>Assessment method</u></p> <ol style="list-style-type: none"> Outcome-related departmental exam questions Outcome-related projects Lab exercise

<p>Curriculum</p> <p>List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.</p> <p>Associate degree programs must provide a semester by semester program layout.</p>	<table> <tr> <td>ROB 221</td> <td>Robotics III</td> <td>4 credits</td> </tr> <tr> <td>NCT 100</td> <td>Fundamentals of Manufacturing (CNC)</td> <td>3 credits</td> </tr> <tr> <td>NCT 101</td> <td>Introduction to Computerized Machining (CNC) I</td> <td>2 credits</td> </tr> <tr> <td>NCT 110</td> <td>Introduction to Computerized Machining (CNC) II</td> <td>2 credits</td> </tr> <tr> <td>MEC 105</td> <td>Fundamentals of Fluid Power</td> <td>4 credits</td> </tr> <tr> <td>ELE 254</td> <td>Programmable Controllers (PLCs) II</td> <td>4 credits</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: right;">Total: 19 credits</td> </tr> </table>	ROB 221	Robotics III	4 credits	NCT 100	Fundamentals of Manufacturing (CNC)	3 credits	NCT 101	Introduction to Computerized Machining (CNC) I	2 credits	NCT 110	Introduction to Computerized Machining (CNC) II	2 credits	MEC 105	Fundamentals of Fluid Power	4 credits	ELE 254	Programmable Controllers (PLCs) II	4 credits			Total: 19 credits
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<p>Budget</p> <p>Specify program costs in the following areas, per academic year:</p>	<table border="1"> <thead> <tr> <th></th> <th>START-UP COSTS</th> <th>ONGOING COSTS</th> </tr> </thead> <tbody> <tr> <td>Faculty</td> <td style="text-align: center;">\$ 0 .</td> <td style="text-align: center;">\$ 0 .</td> </tr> <tr> <td>Training/Travel</td> <td style="text-align: center;">.</td> <td style="text-align: center;">.</td> </tr> <tr> <td>Materials/Resources</td> <td style="text-align: center;">.</td> <td style="text-align: center;">.</td> </tr> <tr> <td>Facilities/Equipment</td> <td style="text-align: center;">.</td> <td style="text-align: center;">.</td> </tr> <tr> <td>Other</td> <td style="text-align: center;">.</td> <td style="text-align: center;">.</td> </tr> <tr> <td style="text-align: right;">TOTALS</td> <td style="text-align: center;">\$ 0 .</td> <td style="text-align: center;">\$ 0 .</td> </tr> </tbody> </table>		START-UP COSTS	ONGOING COSTS	Faculty	\$ 0 .	\$ 0 .	Training/Travel	.	.	Materials/Resources	.	.	Facilities/Equipment	.	.	Other	.	.	TOTALS	\$ 0 .	\$ 0 .
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<p>Program Description for Catalog and Web site</p>	<p>The automation specialist certificate builds on skills obtained in the robotics technician certificate for those with the desire to enter the field of automation and robotics. Students will learn how robots are programmed and wired into larger systems. Technicians work in industrial settings to operate, maintain, and program robots. People who enjoy technology, working with their hands, and manipulating program code are well suited for this career.</p>																					
<p>Program Information</p>	<p>Accreditation/Licensure – None required</p> <p>Advisors – Niki Lee</p> <p>Advisory Committee -</p> <p>Admission requirements - None</p> <p>Articulation agreements -</p> <p>Continuing eligibility requirements -</p>																					

Assessment plan:

Program outcomes to be assessed	Assessment tool	When assessment will take place	Courses/other populations	Number students to be assessed

1. Install and troubleshoot PLC communication.	1. Outcome-related departmental exam questions 2. Outcome-related lab quizzes	Fall 2025	ELE 254	All students
2. Set up and operate vertical machining centers and turning centers.	Outcome-related project	Fall 2025	NCT 110	All students
3. Build a circuit from a schematic.	Lab exercise	Fall 2025	MEC 105	All students

Scoring and analysis plan:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally-developed rubric, external evaluation, other). Attach the rubric.

Outcome-related questions on departmental exams will be scored using an answer key.

Outcome-related lab quizzes will be scored using a rubric.

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2. Indicate the standard of success to be used for this assessment.


Outcome #1: 70 % of students will score 70% or higher.

Outcome #2: 75% of students will score 75% or higher.

Outcome #3: 70% of the students will score 70% (7 of 10) or higher.

3. Indicate who will score and analyze the data.

Departmental faculty

REVIEWER	PRINT NAME	SIGNATURE	DATE
Department Chair/Area Director	Allan Coleman	Allan Coleman	01/17/2022
Dean	Jimmie Baber	Jimmie Baber	1/25/2022
Curriculum Committee Chair	Randy Van Wagnen	R Van Wagnen	3-15-22
Assessment Committee Chair	Shawn Deron		3/16/2022
<p>Please submit completed form to the Office of Curriculum and Assessment (SC 257). Once reviewed by the appropriate faculty committees, we will secure the signature of the VPI and President.</p>			
Vice President for Instruction <input type="checkbox"/> Approved for Development <input type="checkbox"/> Final Approval	Kimberly Hurns	Kim Hurns	3-17-22
President	Rose Bellanca	Rose Bellanca	3-23-22

Board Approval	N/A	N/A	4/26/22
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Reviewed by C&A Committees 2/10/22