

**Board of Trustees**  
Washtenaw Community College

**ACTION**

4800 E. Huron River Drive  
Ann Arbor, Michigan 48105-4800

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Subject	Date
Recommendation for New Programs for 2022-23	April 26, 2022

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**RECOMMENDATION**

That the Board of Trustees approve the New Programs for Fall 2022 as listed below:

- ✿ Entrepreneurship Essentials Certificate – Business and Computer Technologies Division – Business Department
  
- ✿ Introduction to Elementary Education Certificate – Humanities, Social and Behavioral Science Division - Behavioral Sciences Department
  
- ✿ Robotics Technician Certificate – Advanced Technologies and Public Service Careers Division - Advanced Manufacturing Department
  
- ✿ Automation Specialist Advanced Certificate – Advanced Technologies and Public Service Careers Division - Advanced Manufacturing Department

**A ROLL CALL VOTE WILL BE TAKEN**

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Prepared by: Dr. Kimberly Hurns  
Title: Executive Vice President for  
Instruction & Academic Affairs

Recommended by: *Rose B. Bellanca, Ed. D.*  
Rose B. Bellanca, President

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# Recommendation for New Programs for 2022-2023

## Entrepreneurship Essentials

Certificate – 9 credits

Business and Computer Technologies Division – Business Department

**Description:** This certificate will prepare the student to start a business venture by examining the vital tools needed to support a small business opportunity. Students will develop business and financial plans, a business website and present (pitch) their ideas. This certificate will be a stackable credential which may also be applied to the Entrepreneurship and Innovation certificate or the Management Degree with an Entrepreneurship & Innovation concentration.

**Need/Job Demand:** The three classes being offer for this certificate will allow students the opportunity to build their potential small business with the resources provided in class and on campus (The Entrepreneurship Center). Upon completion of the three classes students will be put in place to access the tools needed to start a business and maintain it for long-term success. In the United States, in July 2020 the number of applications for starting a business reached its all-time highs of 551,657 an increase of 95% compared to the same period in 2019, according to the Census Bureau. Entrepreneurship is a consistently growing area of business showing above average growth opportunities in the future.

### Student Learning Outcomes:

1. Conduct and apply research to develop a viable entrepreneurial venture.
2. Utilize a business model canvas to prepare and present a business pitch.
3. Complete a business/financial plan to start an entrepreneurial venture.
4. Develop a website, including a blog, for a business venture.

**Curriculum Review:** The Curriculum and Assessment Committees recommended approval of this program on January 13, 2022.

**Wage Data:** The 2019 median wage was \$40,000 annually.<sup>1</sup>

### Program Requirements:

<i>Course</i>	<i>Title</i>	<i>Credits</i>
BMG 101	Entrepreneurship I: Finding your Opportunity	3
BMG 109	Entrepreneurship II: Starting your Business	3
BMG 209	Entrepreneurship III: Running and Growing your Business	3
<b>Total Credits</b>		<b>9</b>

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<sup>1</sup> [Entrepreneur salary in Michigan - CareerExplorer](#)

# Recommendation for New Programs for 2022-2023

## Introduction to Elementary Education

Certificate – 34 credits

Humanities, Social and Behavioral Science Division

Behavioral Sciences Department

**Description:** This program prepares students to transfer into an elementary education program at a four-year college or university. The first year of instruction in a bachelor's degree program in elementary education is covered. The program includes the general education courses used for many elementary education programs in Michigan that prepare students for the state-mandated basic skills tests. Requirements may vary among colleges so students should contact an advisor to discuss how the curriculum will transfer to your intended 4-year college.

**Need/Job Demand:** The Michigan Department of Education is currently restructuring the process for and requirements to become a certified teacher in the State of Michigan. As a result, the current Associate in Arts Elementary Education program requirements no longer meet the needs of WCC students. After discussions with nine of Michigan's 4-year colleges and universities, we have found that they are still in the process of developing the program requirements for their baccalaureate students to align with the changing state requirements. While two of the 9 colleges recommend students complete the Michigan Transfer Agreement (MTA) most do not. Therefore, we have determined and recommend that WCC discontinue the current AAELM program and replace it with a certificate. This proposed certificate includes the courses that align with the courses EMU will accept for transfer to their teacher certification program.

The job outlook for Kindergarten and Elementary School Teachers is good. The number of openings is expected to grow by 7% between 2020 and 2030<sup>2</sup>. In addition, Michigan lists Elementary School Teachers as one of the top 50 Hot Jobs<sup>3</sup> in Michigan with an expected growth of 3.5% between 2018 and 2028.

### Student Learning Outcomes:

1. Develop a sample lesson plan that addresses diverse learning styles.
2. Apply learning strategies and instructional approaches that meet the needs of exceptional students based on their characteristics.
3. Explain historical perspectives, legislative and litigative history, models, theories and philosophies that proved the basis for special education practice.
4. Practice high leverage core teaching practices and examine how they can be helpful in teaching math to grades Pre-Kindergarten through sixth grade (PK-6).

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<sup>2</sup> Occupational Outlook Handbook – U.S. Bureau of Labor Statistics [www.bls.gov/ooh/](http://www.bls.gov/ooh/)

<sup>3</sup> Hot Jobs Bureau of Labor Market Information and Strategic Initiatives [www.michigan.gov/LMI](http://www.michigan.gov/LMI)

## Recommendation for New Programs for 2022-2023

**Curriculum Review:** The Curriculum and Assessment Committees recommended approval of this program on 2/24/22.

**Wage Data:** Students can make anywhere from \$23-\$41 per hour or approximately \$60,660 per year as an Elementary Schools Teacher.<sup>4</sup>

### Program Requirements:

<i>Class</i>	<i>Title</i>	<i>Credit Hours</i>
ENG 111	Composition I	4
COM 101	Fundamentals of Speaking	3
MTH 148	Functional Math for Elementary Teachers I	4
MTH 149	Functional Math for Elementary Teachers II	4
PHY 100	Physics for Elementary Teachers	4
GEO 101	World Regions Geography	3
PSY 220	Human Development & Learning	3
PSY 251	Education of Exceptional Child	3
ENG 240	Children's Literature	3
	Restricted Humanities Elective*	3
<b>Total Credits</b>		<b>34</b>

\*Restricted Humanities Elective - select one of ENG 140, ENG 160, ENG 170, ENG 181, ENG 200, FRN 111, FRN 122, GRM 111, GRM 122, HUM 145, HUM 101, HUM 102, HUM 103, HUM 146, PHL 101, PHL 200, PHL 205, PHL 241, PHL 244, SPN 111 OR SPN 122

<sup>4</sup> Occupational Outlook Handbook – U.S. Bureau of Labor Statistics [www.bls.gov/ooh/](http://www.bls.gov/ooh/)

# Recommendation for New Programs for 2022-2023

## Robotics Technician

Certificate – 18 credits

Advanced Technologies and Public Service Careers Division

Advanced Manufacturing Department

**Description:** The robotics technician certificate is a starting point for those with the desire to enter the field of automation and robotics. Students will work in industrial settings to operate, maintain and program robots. People that enjoy technology, working with their hands and manipulating program code are well-suited for this career.

**Need/Job Demand:** The Michigan Department of Technology, Management and Budget<sup>5</sup> expects a projected job growth of 7% based on a favorable mix of projected long-term job growth, projected annual job openings and median wages.

### Student Learning Outcomes:

1. Read and interpret beginning level robot programs.
2. Demonstrate the proper use of electrical test equipment including multimeter, function generator and oscilloscope.
3. Develop, interpret and troubleshoot PLC programs with relay-type, timer, counter, data manipulation, math and program control instructions using PLC programming and monitoring software.

**Curriculum Review:** The Curriculum and Assessment Committees recommended approval of this program on 2/10/22.

**Wage Data:** The 2020 median wage was \$25.00 hourly.<sup>6</sup>

### Program Requirements:

<i>Class</i>	<i>Title</i>	<i>Credits</i>
ROB 101	Robotics I – I	2
ROB 110	Robotics I – II	2
ELE 111	Electrical Fundamentals	4
ROB 212	Robotics II	4
MEC 101	Blueprint Reading for Manufacturing	2
ELE 224	Programmable Controllers (PLCs) I	4
<b>Total Credits</b>		<b>18</b>

<sup>5</sup> Michigan Department of Technology, Management and Budget Job Outlook through 2028

<sup>6</sup> *ibid*

# Recommendation for New Programs for 2022-2023

## Automation Specialist

Advanced Certificate – 19 Credits

Advanced Technologies and Public Service Careers Division

Advanced Manufacturing Department

**Description:** 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.

**Need/Job Demand:** The Michigan Department of Technology, Management and Budget<sup>7</sup> expects a projected job grown of 7% based on a favorable mix of projected long-term job grown, projected annual job openings and median wages.

### Student Learning Outcomes:

1. Install and troubleshoot PLC communication.
2. Setup and operate lathe and mill machining centers.
3. Build a circuit from a schematic.

**Curriculum Review:** The Curriculum and Assessment Committees recommended approval of this program on 2/10/22.

**Wage Data:** The 2020 median wage was \$25.00 hourly.<sup>8</sup>

### Program Requirements:

<i>Class</i>	<i>Title</i>	<i>Credit Hours</i>
ROB 221	Robotics III	4
NCT 100	Fundamentals of Manufacturing (CNC)	3
NCT 101	Introduction to Computerized Machining (CNC) I	2
NCT 110	Introduction to Computerized Machining (CNC) II	4
MEC 105	Fundamentals of Fluid Power	4
ELE 254	Programmable Controllers (PLC'S) II	4
<b>Total Credits</b>		<b>19</b>

<sup>7</sup> Michigan Department of Technology, Management and Budget Job Outlook through 2028

<sup>8</sup> Ibid