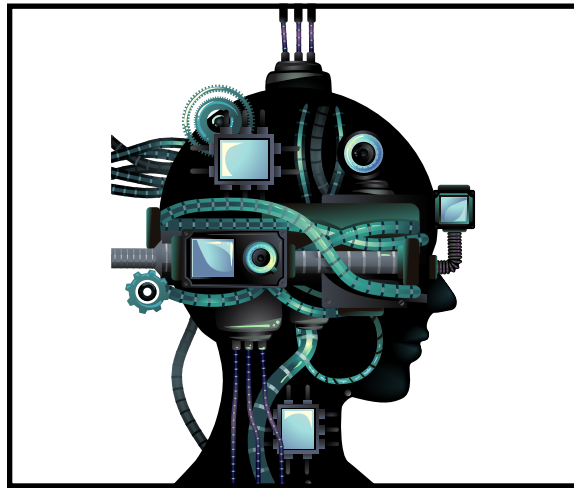


# CHIPPEWA VALLEY SCHOOLS

## Career and Technical Education



# MECHATRONICS AND ROBOTICS

Mechatronics integrates principles from four engineering disciplines: electrical, mechanical, computer, and industrial. Thus, students will learn about robots, machines, electronics, hydraulics & pneumatics, electrical motor controls, sensors, computer-aided design (CAD), programming, programmable logic controls (PLC), diagnostics, computer numeric control (CNC), and other topics that together form the basis of “smart” devices used in robotics and advanced automated systems. This important knowledge is needed not only by highly skilled technicians who help install, program, trouble-shoot and fix problems, but also by engineers who plan, design, develop, or otherwise work with complex mechatronic systems.

### Examples of Careers:

- Automation Engineer
- Big Data Analyst
- Control System Design
- Control System Troubleshooting
- Data Scientist
- Electro-mechanical Systems
- Electronics Design Engineer
- Instrumentation Engineer
- Machine Assembly
- Mechanical Design Engineer
- Mechanical Drafting
- Mechanical Engineering
- Process Engineering Technology
- Robotics
- Robotics Engineer
- Software Engineer
- Technician

### Examples of Degrees, Certificates and/or Certifications

- Computer Engineering
- Electrical Engineering
- Mechanical Engineering
- Mechatronics
- Robotics

### STEM

Successful completers of this STEM (Science, Technology, Engineering and Math) based, 2-year program will gain foundational knowledge and skills in the high-demand, multidisciplinary area of mechatronics.

“Mechatronics” comes from combining the words mechanical and electronics, though it actually also includes computer controls.



As a result of the strong demand for mechatronics professionals, the State of Michigan offers a program called MAT2 (Michigan Advanced Technician Training) that provides FREE tuition and paid employment to qualified applicants accepted into the post high school training program. Students successfully completing CVS's Mechatronics & Robotics program will be ideal candidates for this opportunity.

### Classes can meet the following graduation requirements:

Visual and Performing Arts Credit

World Language Credit

Senior Math-Related Credit

### Articulation — Earn College Credits

Students successfully completing the CTE State-approved program may be eligible for tuition free credit.

### Instructor:

Mr. Jomo Walker

[jwalker01@cvs.k12.mi.us](mailto:jwalker01@cvs.k12.mi.us)

Phone: 586.723.2731



**NOTICE OF NONDISCRIMINATION** It is the policy of Chippewa Valley Schools not to discriminate on the basis of race, color, religion, national origin or ancestry, gender, age, disability, height, weight or marital status in its programs, services, activities, or employment. Inquiries related to nondiscrimination policies should be directed to: Civil Rights Coordinator, Assistant Superintendent of Human Resources, Chippewa Valley Schools Administration, 19120 Cass Avenue, Clinton Township, MI 48038 Phone: 586-723-2090 / Nondiscrimination inquiries related to disability should be directed to: Section 504 Coordinator, Director of Special Services, (same address) Phone: 586-723-2180

## EXAMPLES OF DEGREES, CERTIFICATES AND/OR CERTIFICATIONS

- Computer Engineering
- Electrical Engineering
- Mechanical Engineering
- Mechatronics
- Robotics



## EXAMPLES OF CAREERS:

- Automation Engineer
- Big Data Analyst
- Control System Design
- Control System Troubleshooting
- Data Scientist
- Electro–mechanical Systems
- Electronics Design Engineer
- Engineer
- Instrumentation Engineer
- Machine Assembly
- Mechanical Design Engineer
- Mechanical Drafting
- Mechanical Engineering
- Process Engineering Technology
- Robotics
- Robotics Engineer
- Software Engineer
- Technician

## STEM

Successful completers of this STEM (Science, Technology, Engineering and Math) based, 2–year program will gain foundational knowledge and skills in the high–demand, multidisciplinary area of mechatronics.

“Mechatronics” comes from combining the words mechanical and electronics, though it actually also includes computer controls.

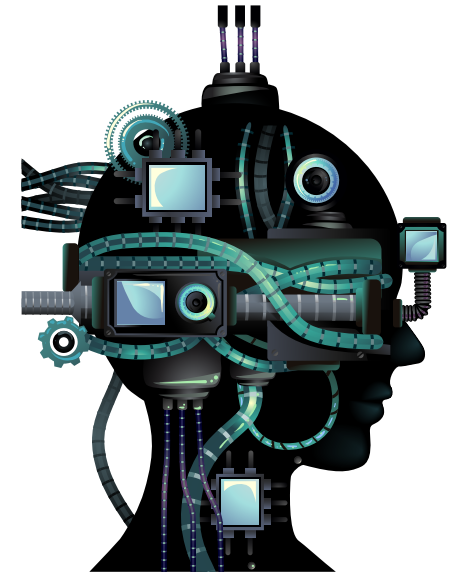


As a result of the strong demand for mechatronics professionals, the State of Michigan offers a program called MAT2 (Michigan Advanced Technician Training) that provides FREE tuition and paid employment to qualified applicants accepted into the post high school training program. Students successfully completing CVS’s Mechatronics & Robotics program will be ideal candidates for this opportunity.

**NOTICE OF NONDISCRIMINATION** It is the policy of Chippewa Valley Schools not to discriminate on the basis of race, color, religion, national origin or ancestry, gender, age, disability, height, weight or marital status in its programs, services, activities, or employment. Inquiries related to nondiscrimination policies should be directed to: Civil Rights Coordinator, Assistant Superintendent of Human Resources, Chippewa Valley Schools Administration, 19120 Cass Avenue, Clinton Township, MI 48038 Phone: 586–723–2090 / Nondiscrimination inquiries related to disability should be directed to: Section 504 Coordinator, Director of Special Services, (same address) Phone: 586–723–2180.



# MECHATRONICS AND ROBOTICS



## INSTRUCTOR:

Mr. Jomo Walker

[jwalker01@cvs.k12.mi.us](mailto:jwalker01@cvs.k12.mi.us)

Phone: 586.723.2855