



# MECHATRONICS ROBOTICS & AUTOMATION

ELIGIBLE FOR  
**FINANCIAL AID  
& AWARDS**  
[assiniboine.net/financialaid](http://assiniboine.net/financialaid)

**3-YEAR  
DIPLOMA**

Learn hands-on expertise in aspects of mechanical engineering, electronics, and computer science, pulling together knowledge from these disciplines to develop automated machines to service the agricultural sector.

## PROGRAM LEARNING OUTCOMES

- » Fabricate and build electrical, electronic, and mechanical components and assemblies in accordance with operating standards, job requirements, and specifications.
- » Analyze, interpret, and produce electrical, electronic, and mechanical drawings and other related technical documents and graphics necessary for electromechanical design in compliance with industry standards.
- » Select and use a variety of troubleshooting techniques and equipment to assess, modify, maintain, and repair electromechanical circuits, equipment, processes, systems, and subsystems.
- » Modify, maintain, and repair electrical, electronic, and mechanical components, equipment, and systems to ensure that they function according to specifications and to optimize production.
- » Design and analyze mechanical components, processes, and systems by applying engineering principles and practices.
- » Design, analyze, build, select, commission, integrate, and troubleshoot a variety of industrial motor controls and data acquisition devices and systems, digital circuits, passive AC and DC circuits, active circuits and microprocessor-based systems.
- » Install and troubleshoot computer hardware and programming to support the electromechanical engineering environment.
- » Analyze, program, install, integrate, troubleshoot and diagnose automated systems including robotic systems.
- » Establish and maintain inventory, records, and documentation systems to meet organizational and industry standards and requirements.
- » Select and purchase electromechanical equipment, components, and systems that fulfill job requirements and functional specifications.
- » Develop strategies for ongoing personal and professional development to enhance work performance and to remain current in the field and responsive to emergent technologies and national and international standards.
- » Contribute as an individual and a member of an electromechanical engineering team to the effective completion of tasks and projects.
- » Design and analyze electromechanical systems by interpreting fluid mechanics and the attributes and dynamics of fluid flow used in hydraulic and fluid power systems.

For a full list of program learning outcomes, visit [assiniboine.net/mechatronics](http://assiniboine.net/mechatronics)



**Campus/Delivery Options**  
Victoria Avenue East campus



**Available Intakes**  
September 2025



**Work Integrated Learning**  
12 weeks

## This program is a good fit if you would enjoy...

- ✓ An emerging field with evolving technologies
- ✓ Excellent problem-solving and troubleshooting skills
- ✓ Proficiency in math and physics
- ✓ Precision and attention to detail
- ✓ Technical aptitude

## EXPECTATIONS

### Program & Industry

- » Be adaptable to new changes and trends in the industry and be able to adjust their work accordingly.
- » Be committed to ongoing learning and professional development to stay current with industry trends and best practices.
- » Have a solid understanding of physics, calculus, robotics, and circuitry, as well as aspects of fluid mechanics, control theory, and computer programming.
- » Have excellent attention to detail.
- » Have physical strength and stamina as well as the mobility and motor skills to undertake the required tasks.
- » Operate equipment as required.

## CAREER OPPORTUNITIES

Technician/technologist in automation • control system design • electronics design • mechanical design robotics • manufacturing • product development instrumentation engineering

## ADMISSION REQUIREMENTS

- » A complete Manitoba Grade 12 or equivalent
- » Applied Mathematics 40s or equivalent

# NEXT STEPS

Confidence in the career path you choose to embark on is key, and selecting the right program for you is the first step. At Assiniboine, we offer an opportunity to explore and experience a program before applying.

## SPEND A DAY WITH US

Our Spend a Day program runs from November to March for most programs. When you spend a day at Assiniboine, we partner you with a current student in the program of your choice and you will have the opportunity to:

- » Participate in classroom activities
- » Experience college life
- » Explore all of our helpful services for students
- » Meet current college students and instructors
- » Enjoy a free lunch on us!

## ATTEND AN ONLINE INFO SESSION

Our free, live online information sessions give you the inside scoop on our college, the program you're interested in and life at Assiniboine. Register in advance and from the comfort of your own home, log in to learn what Assiniboine has to offer.

[assiniboine.net/experienceACC](https://assiniboine.net/experienceACC)

## STILL NOT SURE?

Contact our recruitment team to arrange a campus tour or an appointment to discuss your career options.

**APPLY TODAY**  
[assiniboine.net/applynow](https://assiniboine.net/applynow)

