

## Donald Engineering Supports Mechatronics Playground at Michigan Tech.

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With increases in smart technology, including IoT and Industry 4.0, things are changing in manufacturing. To help its graduates remain competitive, Michigan Technological University has combined the technologies of mechanical and electrical engineering into one degree: [Mechatronics](#). The multidisciplinary program combines these disciplines, along with fluid power, robotics, software, and computational hardware for a comprehensive education in the most current Mechatronics standards and products.

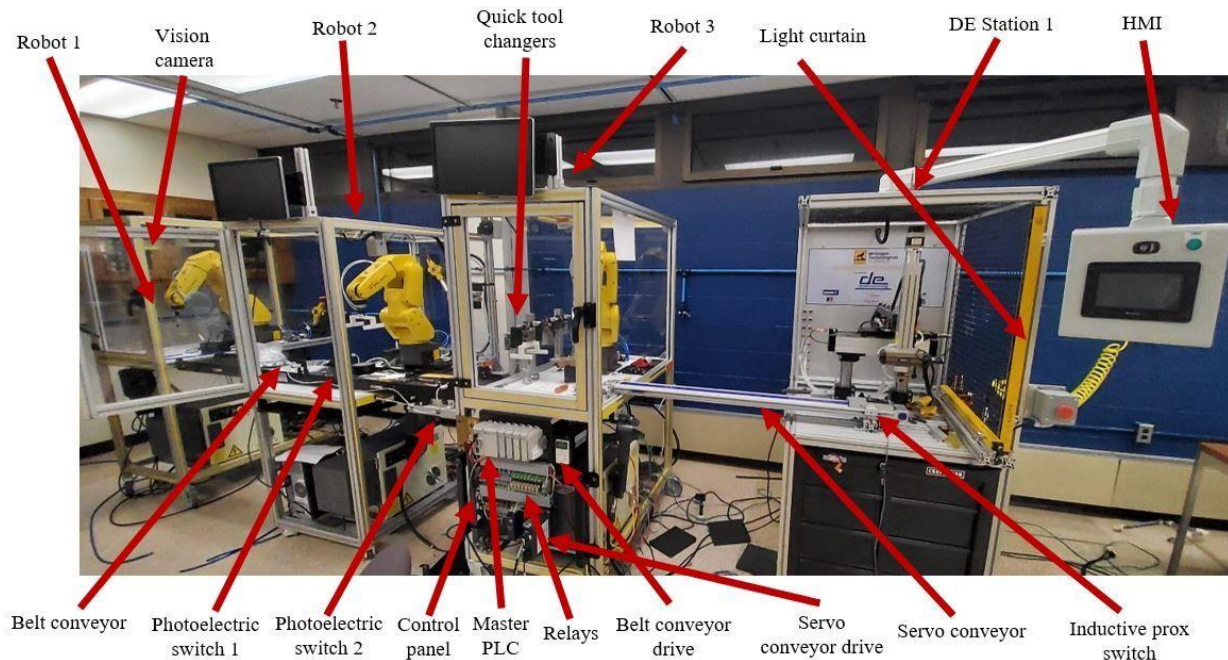
A [M.S. in Mechatronics](#) was begun at Michigan Tech two years ago, and this year a [B.S. in Mechatronics](#) was added with encouragement and support from Mark Gauthier, Michigan Tech alumnus and president of **Donald Engineering (DE)**.

Mechatronics courses and degrees can be pursued on-campus, with some courses available online. Co-op options and graduate certificates are available for those interested in expanding their on-the-job knowledge. FANUC industrial certification in robotics is available for those already working in industry.

As part of their commitment to invest in the future of Grand Haven and Western Michigan, **DE** has donated a number of interactive learning tools to Michigan Tech's on-campus ***Mechatronics Playground***. The new learning lab presents hands-on opportunities in programming, automation techniques, manufacturing principals, and safety.

### Donald Engineering's Mechatronics Playground

**DE** designed, built in-house, and provided these learning stations for the ***Mechatronics Playground at Michigan Tech***.



The units **Donald Engineering** has provided to the Mechatronics lab include:

- Grip force and position sensor technology
- Two 3-axis robotic pneumatic platforms with HMIs control.
- Automatic tool changing station for multiple robotic end-of-arm tooling
- Belt-drive linear axis system for force position and overhung load and vibration analysis
- Collaborative end-of-arm tooling system kits and obstruction monitors
- Hydraulic closed-loop pump stand for understanding hydraulic pump technology
- PID motion controller and PI proportional pneumatic pressure control
- Control reliable machine safety equipment

### **DE Community**

The team at Donald Engineering strongly believes in investing in our community's future and we believe our responsibility as keyholders for the next generation is to teach the true cost of ownership, efficiencies, safety, and productivity in manufacturing. Part of this commitment is to provide state-of-the-art educational tools and attract Mechatronics professionals to western Michigan. Contact Professor Alex Sergeev ([avsergue@mtu.edu](mailto:avsergue@mtu.edu)) to learn more about Mechatronics at Michigan Tech.

This program and **DE's** participation wouldn't be possible without the support of our customers and help from our vendors. We are honored to be in a position to give back to and support the next generation of engineers. Thank you to **Continental Hydraulics, Ross Controls, Schunk, Clippard, Oilgear, and Milwaukee Cylinder** for being strong supporters of this program.

**Learn more** about Michigan Tech's Mechatronics degree programs here:

<https://www.mtu.edu/mechatronics/>

**View a video** about the Michigan Tech Mechatronics Playground here:

[https://youtu.be/HiXQpuCM\\_-Y](https://youtu.be/HiXQpuCM_-Y)