

## RAMT-Mechatronics Engineering Technology

### ► Contact Information

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### ► Delivery Methods

Face-to-Face: Wahpeton

The Mechatronics Engineering Technology (MET) program is designed to provide students with the knowledge, skills and abilities necessary to succeed in industries utilizing robotics and automated systems while preparing them for transfer into four-year engineering and/or engineering technology programs.

The program combines disciplines such as robotics, computer networking, automated controls, mechanics, and fluid power utilized in manufacturing and production facilities.

Industries that hire MET graduates with the skill sets learned in this program include; manufacturing, pharmaceutical, food production, energy, defense, and agriculture.

A MET program graduate may work performing installations, troubleshooting, repairing, and programming for automated systems, or may fulfill the roles of an entry-level engineering technician.

A Mechatronics Engineering Technology student will experience a combination of lecture and lab classes with knowledgeable instructors, using hands-on real-world applications and scenarios which will prepare the student for a lifelong career while preparing for follow-on education of four-year institution, if desired.

**NOTE:** This program requires an HP EliteBook 850 Laptop or equivalent. Please refer to the NDSCS website for specifications. The cost will be approximately \$1065.00 if purchased through NDSCS. For further information, contact Lonnie Wurst, program coordinator, at 701-671-2832.

Course Code	Course Title	Credits
ECAL 241	Basic Motor Controls Lab	3
MFGT 107	Introduction to CNC	2
MFGT 110	Industrial Shop Practices	2
RAMT 101	Applied DC Theory	4
RAMT 103	Applied AC Theory	4
RAMT 109	Mechanical Drives and Maintenance II	2
RAMT 120	3D Modeling and Design	3
RAMT 202	PLC's II	3
RAMT 203	Machine Safety and Panel Building	3
RAMT 208	Information Technology for Technicians	2
RAMT 221	Robotics II	3
RAMT 224	Robotics Systems I	3
RAMT 225	Digital and Pneumatic Systems	2
RAMT 240	Principles of Project Management	2
RAMT 243	PLC's I	3
RAMT 244	System Integration and Troubleshooting	2
RAMT 246	Quality Assurance Standards and Methods	3
RAMT 250	Drives and Servo Systems	2
RAMT 297	Cooperative Education	2

### Related/General Education Courses

ENGL 110	College Composition I	3
English/Communication Elective (choose one)		3
ENGL 120	College Composition II	
ENGL 125	Introduction to Professional Writing	
COMM 110	Fundamentals of Public Speaking	
FYE 101	Science of Success	1
Wellness Electives		2
MATH 103	College Algebra	3
MATH 105	Trigonometry	2
PHYS 211	College Physics	3
PHYS 211L	College Physics I Lab	1
Social and Behavioral Sciences, Humanities, History and/or Computer Electives		4
Recommended:		
• CIS 101 – Computer Literacy – 2 cr		
• PSYC 100 – Human Relations in Organizations – 2 cr		

**Total Required Credits** **72**

### Admission Requirements\*

The applicants must be high school graduates or equivalent. Students considered for acceptance must complete all admission requirements.

**Please Note:** Students are placed into English, math and reading courses based on ACT, ACCUPLACER or other nationally recognized tests. Please see [www.ndscs.edu/current-students/student-success/test-center](http://www.ndscs.edu/current-students/student-success/test-center) for the NDSCS Course Placement Policy and testing information. Students may be on an extended plan of study pending their course placement.

*\*Program Admission Requirements are subject to revision. Please check the department or program website under Program Admission Requirements for current information.*

### Award

Upon successful completion of the required courses, students will be awarded an Associate in Applied Science degree in Robotics, Automation and Mechatronics Technology – Mechatronics Engineering Technology.

Revised: May 2022