

RAMT-Mechatronics Engineering Technology

► Contact Information

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701-671-2832
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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 ProBook 650 laptop or equivalent. Please refer to the NDSCS website for specifications. The cost will be approximately \$950 if purchased from NDSCS. For further information, contact Lonnie Wurst, Robotics, Automation and Mechatronics Technology program coordinator, at 701-671-2832.

| Course Code | Course Title | Credits |
|-------------|---|---------|
| CAD 120 | Introduction to AutoCAD | 3 |
| or ARCT 120 | AutoCAD for Architecture (3) | |
| ECAL 224 | Automated Industrial Controls Lab | 5 |
| ECAL 241 | Basic Motor Controls Lab | 3 |
| ECAL 243 | Programmable Logic Controllers 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 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 240 | Principles of Project Management | 2 |
| 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.

Required minimum placement scores:

| ACT | ACCUPLACER | ACCUPLACER NEXT GENERATION |
|--------------|-------------------------|-------------------------------|
| Reading – 18 | Reading Comp – 61 | Reading – 256 |
| English – 18 | WritePlacer – 3-4 | Writing – 256 |
| Math – 21 | Arithmetic – 51 | QAS – 255 |
| | Elementary Algebra – 25 | AAF – 237 |

Or transfer equivalencies will apply as appropriate

Applicants not meeting the above requirements are encouraged to visit with the academic counselor at 701-671-2257 or the Robotics, Automation and Mechatronics Technology program coordinator at 701-671-2832 for strategies to meet the admission requirements.

**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: June 2020