RAMT-General Technician

Contact Information
Lonnie Wurst, program coordinator
lonnie.wurst@ndscs.edu
701-671-2832
Barnard Hall 206

Delivery Methods
Face-to-Face: Wahpeton

The Robotics, Automation and Mechatronics Technology (RAMT) program is designed to provide students with the knowledge, skills, and abilities necessary to succeed in industries utilizing robotics and automated systems.

This program combines disciplines such as electronics, networking, computers, mechanics, and fluid power utilized in manufacturing and production facilities.

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

A RAMT technician graduating from this program may work performing installations, troubleshooting, repairing, and programming for automated systems.

A Robotics, Automation and Mechatronics 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.

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.

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

Required minimum placement scores:

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<thead>
<tr>
<th>ACT</th>
<th>ACCUPLACER</th>
<th>ACCUPLACER</th>
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</thead>
<tbody>
<tr>
<td>Reading – 15</td>
<td>Reading Comp – 61</td>
<td>NEXT GENERATION</td>
</tr>
<tr>
<td>English – 15</td>
<td>WritePlace – 3-4</td>
<td>Reading – 240</td>
</tr>
<tr>
<td>Math – 17</td>
<td>Arithmetic – 51</td>
<td>Writing – 237</td>
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<tr>
<td></td>
<td>Elementary Algebra – 25</td>
<td>QAS – 232</td>
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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.

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Course Code | Course Title                                      | Credits |
------------|--------------------------------------------------|---------|
ECAL 223    | Electronic Devices/Lab                           | 4       |
ECAL 224    | Automated Industrial Controls Lab               | 5       |
ECAL 241    | Basic Motor Controls Lab                         | 3       |
ECAL 243    | Programmable Logic Controllers Lab              | 3       |
MFGT 110    | Industrial Shop Practices                        | 2       |
RAMT 101    | Applied DC Theory                                | 4       |
RAMT 103    | Applied AC Theory                                | 4       |
RAMT 107    | Mechanical Drives and Maintenance I             | 2       |
RAMT 109    | Mechanical Drives and Maintenance II            | 2       |
RAMT 137    | Print Reading, Drafting and Safety              | 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
CIS 101    | Computer Literacy                               | 2       |
ENGL 110   | College Composition I                           | 3       |
English/Communication Elective (choose one) | 3       |
ENGL 105   | Technical Communications                        |         |
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 |                                  |         |
MATH 130   | Technical Mathematics                           | 2       |
MATH 132   | Technical Algebra I                             | 2       |
MATH 136   | Technical Trigonometry                          | 2       |
PSYC 100   | Human Relations in Organizations                | 2       |

Total Required Credits 72

Revised: June 2020