Robotics, Automation and Mechatronics Technology

▶ Contact Information

Lonnie Wurst, program coordinator
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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 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:

ACT	ACCUPLACER
Reading – 15	Reading Comp – 61
English – 15	WritePlacer – 3-4
Math – 17	Arithmetic – 51
	Elementary Algebra – 25

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.

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	Networks, Systems and Sensors	3
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

Course Code	Course Title	Credits
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		2
MATH 130	Technical Mathematics	2
MATH 132	Technical Algebra I	2
MATH 136	Technical Trigonometry	2
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 70

Note: Students intending to transfer to University Programs are strongly encouraged to take the following related/general education courses:

Course Code	Course Title	Credits
CIS 101	Computer Literacy	2
FYE 101	Science of Success	1
Wellness Electives		2
ENGL 110	College Composition I	3
English/Communication Elective (choose 1)		3
ENGL 120	College Composition II	
ENGL 125	Introduction to Professional Writing	
COMM 110	Fundamentals of Public Speaking	
MATH 103	College Algebra	3
MATH 105	Trigonometry	2
PSYC 111	Introduction to Psychology	3

Total Required Credits 70

Revised: May 2019