

# Mechatronics, Robotics & Automation A.A.S.

**Advisors - Ayers Campus:** Wesley Beecham, Electrical Building (256.835.5441) [wbeecham@gadsdenstate.edu](mailto:wbeecham@gadsdenstate.edu);  
Keith Tolbert, Electronics Building (256.835.5460) [ktolbert@gadsdenstate.edu](mailto:ktolbert@gadsdenstate.edu)

**East Broad Campus:** Ralph Whitfield, Bevill Center (256.549.8632) [rwhitfield@gadsdenstate.edu](mailto:rwhitfield@gadsdenstate.edu); Steven Reed, Bevill Center (256.549.8634) [sreed@gadsdenstate.edu](mailto:sreed@gadsdenstate.edu)

NOTICE(s): For the A.A.S. Degree in Mechatronics, Robotics & Automation, the student must complete a minimum of 76 credit hours – a minimum of 61 in technical courses and a minimum of 15 in general education courses – all of which must be approved by the advisor. A maximum of 9 credit hours of technical electives may be selected from any approved area of Engineering Technology programs with prior written approval from the student's major advisor. Technical courses may vary to meet student needs and to provide options. Admission Requirement: High school diploma or GED.

The courses in this program of study may not be offered every semester. It is important to consult with your advisor to determine course schedules to stay on track to graduate.

The student is responsible for verifying the transferability of credit in this program to a senior institution with the appropriate senior institution advisor.

## Area I – Written Composition

Item #	Title	Hours
ENG 101	English Composition I	3
	Sub-Total Credits	3

## Area II – Humanities and Fine Arts

Item #	Title	Hours
	Humanities/Fine Arts Elective	3
	Sub-Total Credits	3

## Area III – Natural Sciences and Mathematics

Item #	Title	Hours
INT 104	Principles of Technology	3
	MTH 100: Intermediate College Algebra OR numerically higher	3
	Sub-Total Credits	6

## Area IV – History, Social and Behavioral Sciences

<b>Item #</b>	<b>Title</b>	<b>Hours</b>
	History, Social and Behavioral Sciences Elective	3
	Sub-Total Credits	3

## Area V - Required Technical Courses

<b>Item #</b>	<b>Title</b>	<b>Hours</b>
EET 100	Introduction to Engineering Technologies	3
EET 109	Electrical Blueprint Reading I	3
EET 114	Concepts of Solid State Electronics	5
EET 115	Concepts of Digital Electronics	5
	ELT 110 or EET 192	3
	INT 101 or EET 103	3
	INT 103 or EET 104	3
INT 113	Industrial Motor Control I	3
INT 117	Principles of Industrial Mechanics	3
INT 118	Fundamentals of Industrial Hydraulics and Pneumatics	3
INT 139	Introduction to Robotic Programming	3
	ELT 231 or INT 184	3
	ELT 117 or INT 206	3
	ELT 122 or INT 211	3
ORI 101	Orientation to College	1
WKO 101	Workplace Skills Development I	1
	Sub-Total Credits	48

## Additional Coursework:

Choose 13 credit hours from the following list.

Item #	Title	Hours
CIS 146	Computer Applications	3
EET 197	Selected Topics in EET	3
EET 225	Electronics Communications	3
EET 276	Elements of Industrial Controls with PLCs II	3
EET 277	Elements of Industrial Controls with PLCs II Lab	2
EET 278	Advanced Robotics	5
ELT 114	Residential Wiring Methods	3
ELT 115	Residential Wiring Methods II	3
	ELT 118 or INT 158	3
ELT 212	Motor Controls II	3
INT 119	Principles of Mechanical Measurement and Technical Drawing	3
INT 126	Preventive Maintenance	3
INT 127	Principles of Industrial Pumps and Piping Systems	3
INT 128	Principles of Industrial Environmental Controls	3
INT 129	Industrial Safety and Maintenance Techniques	3
INT 134	Principles of Industrial Maintenance Welding and Metal Cutting Techniques	3
INT 180	Special Topics	2
INT 252	Variable Speed Motor Drives	3
INT 280	Special Topics in Industrial Maintenance Technology	3
INT 291	Cooperative Education	3
INT 292	Cooperative Education	3
INT 297 A	Co-Op	1
INT 297 B	Co-Op	1
INT 297 C	Co-Op	1
INT 297 D	Co-Op	1
INT 298	Co-Op	2
MDT 105	Introduction to Computer-Aided Design (CAD)	3
MTT 123	Engine Lathe Lab I	3
MTT 134	Lathe Operations I	3
MTT 137	Milling I	3
MTT 148	Introduction to Machine Shop I Lab	3
SPH 106	Fundamentals of Oral Communication	3
	Sub-Total Credits	87
		<b>76</b>