



## ASSOCIATE OF APPLIED SCIENCE

# AUTOMATION AND ROBOTICS TECHNOLOGY

The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.

2025-26 Catalog

Effective Summer 2025

4556

Business, Engineering, and Information Technologies Division

Industrial Technology Department

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
AIT121	Industrial Internet of Things (IIoT)	3		
AIT139	Introduction to Robotics	2		
AIT220	Industrial Robotics	4		
AIT226	Robotic Vision	2	AIT220	
EET120	DC Circuit Analysis	4	Pre-Co-MTH125 or Pre-Co-MTH135	
EET122	AC Circuit Analysis	4	(Pre-Co-MTH130 or Pre-Co-MTH135) and EET120	
EET227	PLCs and Industrial Controls I	3	EET120 or EST230	
EET228	PLCs and Industrial Controls II	3	EET227	
IET223	Computer Numerical Control	4		
MST221	Mechanical Drive Components	3		
Total		32		
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar <sup>^^</sup>	1	Take first semester	
CSE122	Programming Logic and Problem Solving <sup>^</sup>	3	(IDS102 or Proficiency) and (ITD100 or Proficiency)	
DET125 or MST121	Basic AutoCAD or Blueprint Reading	3 or 2		
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 or Co-ENG011 or Proficiency	
ENG221 or ENG231	Technical Report Writing or College Composition II	3 or 3	ENG124	
MTH135	Precalculus <sup>^</sup> – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	MTH025 or Proficiency	
NET121	Introduction to Computer Networking	3		
PHY121	College Physics I with Algebra (lab) <sup>^</sup>	4	MTH135 or (MTH125 and MTH130) or Proficiency	
	Select one (1) Programming Elective <sup>l</sup>	3	Check for prerequisites	
	Select one (1) Arts & Humanities or Social & Behavioral Sciences Elective <sup>2</sup>	3	Check for prerequisites	
Total		30-31		
TOTAL CREDIT HOURS		62-63		

See next page for footnote specifics

*Students completing this degree may be eligible to also receive an Industrial Technology – Automation and Robotics Specialist Career Enhancement Certificate (4554) and an Automation and Robotics Technology One-Year Certificate (4555).*

PART-TIME STUDENT ADVISING NOTES

Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

Course Sequence

The semester-by-semester listing below provides the normal scheduling option for part-time associate degree students who plan to finish in eight semesters.

<u>First Semester</u>		<u>Credit Hours</u>	<u>Pre- and Co-requisites</u>
SSC101	Student Success Seminar^^	1	<i>Take first semester</i>
AIT121	Industrial Internet of Things (IIoT)	3	
ENG124	College Composition^	<u>3</u>	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
		<u>7</u>	
<u>Second Semester</u>			
MTH135	Precalculus^ – <i>A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.</i>	5	MTH025 <b>or</b> Proficiency
MST221	Mechanical Drive Components	<u>3</u>	
		<u>8</u>	
<u>Third Semester</u>			
CSE122	Programming Logic and Problem Solving^	3	(IDS102 or Proficiency) <b>and</b> (ITD100 or Proficiency)
EET120	DC Circuit Analysis	4	Pre-Co-MTH125 <b>or</b> Pre-Co-MTH135
DET125	Basic AutoCAD	3	
<b>or</b>	<b>or</b>	<b>or</b>	
MST121	Blueprint Reading	<u>2</u>	
		<u>9-10</u>	
<u>Fourth Semester</u>			
AIT139	Introduction to Robotics	2	
ENG221	Technical Report Writing	3	
<b>or</b>	<b>or</b>	<b>or</b>	ENG124
ENG231	College Composition II	3	
EET122	AC Circuit Analysis	<u>4</u>	(Pre-Co-MTH130 or Pre-Co-MTH135) <b>and</b> EET120
		<u>9</u>	
<u>Fifth Semester</u>			
AIT220	Industrial Robotics	4	
IET223	Computer Numerical Control	<u>4</u>	
		<u>8</u>	
<u>Sixth Semester</u>			
EET227	PLCs and Industrial Controls I	3	EET120 <b>or</b> EST230
NET121	Introduction to Computer Networking	3	
AIT226	Robotic Vision	<u>2</u>	AIT220
		<u>8</u>	
<u>Seventh Semester</u>			
EET228	PLCs and Industrial Controls II	3	EET227
	<i>Select one (1) Programming Elective<sup>1</sup></i>	<u>3</u>	
		<u>6</u>	
<u>Eighth Semester</u>			
PHY121	College Physics I with Algebra (lab)^	4	MTH135 <b>or</b> (MTH125 and MTH130) <b>or</b> Proficiency
	<i>Select one (1) Arts &amp; Humanities or Social &amp; Behavioral Sciences Elective<sup>2</sup></i>	<u>3</u>	
		<u>7</u>	
<b>TOTAL CREDITS</b>		<b>62-63</b>	

^Based on SSC placement scores

^^To promote student success, this course should be taken in the first semester

<sup>1</sup>Programming Electives: AIT221, CSE121, CSE221, CSE229, CSE231, CSE233, CSE235

<sup>2</sup>Arts & Humanities or Social & Behavioral Sciences Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122, PSC121, PSY121, PSY123, PSY124, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225