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.

2024-25 Catalog

Effective Summer 2024

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^^	1	*Take first semester*	
CSE122	Programming Logic and Problem Solving^	3	(IDS102 or Proficiency) **and** (ITD100 or Proficiency)	
DET125 **or** MST121	Basic AutoCAD **or** Blueprint Reading	3 **or** 2		
ENG124	College Composition^	3	Co-ENG024 **or** Co-ENG011 **or** Proficiency	
ENG221 **or** ENG231	Technical Report Writing **or** College Composition II	3 **or** 3	ENG124	
MTH135	Precalculus^ – *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)^	4	MTH135 **or** (MTH125 and MTH130) **or** Proficiency	
	Select one (1) Programming Elective[1]	3	*Check for prerequisites*	
	Select one (1) Arts & Humanities or Social & Behavioral Sciences Elective[2]	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).

Revised 1/2024

FULL-TIME STUDENT ADVISING NOTES

<u>Academic Advising</u>

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.

<u>Course Sequence</u>

The semester-by-semester listing below provides the normal scheduling option for full-time associate degree students who plan to finish in two years.

First Semester		Credit Hours	Pre- and Co-requisites
SSC101	Student Success Seminar^^	1	*Take first semester*
AIT121	Industrial Internet of Things (IIoT)	3	
ENG124	College Composition^	3	Co-ENG024 **or** Co-ENG011 **or** Proficiency
MST221	Mechanical Drive Components	3	
MTH135	Precalculus^ – *A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.*	5	MTH025 **or** Proficiency
		15	

Second Semester			
AIT139	Introduction to Robotics	2	
CSE122	Programming Logic and Problem Solving^	3	(IDS102 or Proficiency) **and** (ITD100 or Proficiency)
DET125 **or**	Basic AutoCAD **or**	3 **or**	
MST121	Blueprint Reading	2	
EET120	DC Circuit Analysis	4	Pre-Co-MTH125 **or** Pre-Co-MTH135
ENG221 **or**	Technical Report Writing **or**	3 **or**	ENG124
ENG231	College Composition II	3	
		14-15	

Third Semester			
AIT220	Industrial Robotics	4	
EET122	AC Circuit Analysis	4	(Pre-Co-MTH130 or Pre-Co-MTH135) **and** EET120
EET227	PLCs and Industrial Controls I	3	EET120 **or** EST230
IET223	Computer Numerical Control	4	
NET121	Introduction to Computer Networking	3	
		18	

Fourth Semester			
AIT226	Robotic Vision	2	AIT220
EET228	PLCs and Industrial Controls II	3	EET227
PHY121	College Physics I with Algebra (lab)^	4	MTH135 **or** (MTH125 and MTH130) **or** Proficiency
	Select one (1) Programming Elective[1]	3	*Check for prerequisites*
	Select one (1) Arts & Humanities or Social & Behavioral Sciences Elective[2]	3	*Check for prerequisites*
		15	
	TOTAL CREDITS	**62-63**	

^Based on SSC placement scores
^^To promote student success, this course should be taken in the first semester
[1]Programming Electives: AIT221, CSE121, CSE221, CSE229, CSE231, CSE233, CSE235
[2]Arts & Humanities or Social & Behavioral Sciences Electives: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122, PSC121, PSY121, PSY123, PSY124, PSY221, SOC121, SOC122, SOC123, SOC221, SOC225