



ASSOCIATE OF APPLIED SCIENCE

**INDUSTRIAL TECHNOLOGY – ADVANCED  
MANUFACTURING TECHNOLOGY MAJOR**

*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

**4353**

*Business, Engineering, and Information Technologies Division*

*Industrial Technology Department*

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
AIT122	Machine Tools	4		
IET223	Computer Numerical Control	4		
AIT221	Advanced CNC Programming	3	IET223 or ARL121 or ARL122	
AIT134	Preventive and Predictive Maintenance	3		
AIT220	Industrial Robotics	4		
AIT226	Robotic Vision	2	AIT220	
IET270	Dimensional Metrology and Inspection I <sup>^</sup>	3	(MTH025 or Proficiency) or MTH107	
MST134	Hydraulic and Pneumatic Systems <sup>^</sup>	4	MTH022 or MTH023 or Proficiency	
MST221 or MET225	Mechanical Drive Components or Manufacturing Processes	3 or 3		
<b>Total</b>		<b>30</b>		
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar <sup>^^</sup>	1	Take first semester	
AIT101	Basic Machines <sup>^^</sup>	2	Take first semester	
ITD122	Computer Applications for Professionals <sup>^</sup>	3	ITD100 or Proficiency	
DET125 or AIT137	Basic AutoCAD or CAD/CAM	3 or 4	AIT122 and IET223	
MST121	Blueprint Reading	2		
PHY101	Principles of Physics <sup>^</sup>	4	(MTH024 or MTH025 or Proficiency) or MTH105 or MTH107 and (IDS102 or Proficiency)	
MTH107	Industrial Math <sup>^</sup>	3	(MTH021 or Proficiency) or Pre-Co-MTH007	
EST230	Electrical Circuits and Devices <sup>^</sup>	4	(MTH025 or Proficiency) or MTH107	
ENG124	College Composition <sup>^</sup>	3	Co-ENG024 or Co-ENG011 or Proficiency	
COM121 or COM123	Effective Speaking or Small Group Communication <sup>^</sup>	3 or 3	IDS102 or Proficiency	
IET121	Industrial Management Concepts	2		
	Select one (1) course of Arts & Humanities and/or Social & Behavioral Sciences Elective from the list below. <sup>1</sup>	3	Check for prerequisites	
<b>Total</b>		<b>33-34</b>		
<b>TOTAL CREDIT HOURS</b>		<b>63-64</b>		

See back page for footnotes

*Students completing this degree may be eligible to also receive an Industrial Technology – CAD/CAM Specialist (Computer-Aided Drafting/Computer-Aided Machining Career Enhancement Certificate (4316) and an Industrial Technology – Basic Industrial Maintenance Career Enhancement Certificate (4407).*

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### 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 <sup>^</sup>	1	<i>Take first semester</i>
AIT101	Basic Machines <sup>^^</sup>	2	<i>Take first semester</i>
ITD122	Computer Applications for Professionals <sup>^</sup>	3	ITD100 <b>or</b> Proficiency
ENG124	College Composition <sup>^</sup>	<u>3</u>	Co-ENG024 <b>or</b> Co-ENG011 <b>or</b> Proficiency
		<b>9</b>	
<u>Second Semester</u>			
AIT122	Machine Tools	4	
MST121	Blueprint Reading	2	
MTH107	Industrial Math <sup>^</sup>	<u>3</u>	(MTH021 <b>or</b> Proficiency) <b>or</b> Pre-Co- MTH007
		<b>9</b>	
<u>Third Semester</u>			
IET223	Computer Numerical Control	4	
IET270	Dimensional Metrology and Inspection I <sup>^</sup>	3	(MTH025 <b>or</b> Proficiency) <b>or</b> MTH107
AIT134	Preventive and Predictive Maintenance	<u>3</u>	
		<b>10</b>	
<u>Fourth Semester</u>			
MST221	Mechanical Drive Components	3	
<b>or</b>	<b>or</b>	<b>or</b>	
MET225	Manufacturing Processes	3	
AIT220	Industrial Robotics	<u>4</u>	
		<b>7</b>	
<u>Fifth Semester</u>			
PHY101	Principles of Physics <sup>^</sup>	4	(MTH024 <b>or</b> MTH025 <b>or</b> Proficiency) <b>or</b> MTH105 <b>or</b> MTH107 <b>and</b> (IDS102 <b>or</b> Proficiency)
EST230	Electrical Circuits and Devices <sup>^</sup>	<u>4</u>	(MTH025 <b>or</b> Proficiency) <b>or</b> MTH107
		<b>8</b>	
<u>Sixth Semester</u>			
IET121	Industrial Management Concepts	2	
MST134	Hydraulic and Pneumatic Systems <sup>^</sup>	<u>4</u>	MTH022 <b>or</b> MTH023 <b>or</b> Proficiency
		<b>6</b>	
<u>Seventh Semester</u>			
DET125	Basic AutoCAD	3	
<b>or</b>	<b>or</b>	<b>or</b>	
AIT137	CAD/CAM	4	AIT122 <b>and</b> IET223
AIT221	Advanced CNC Programming	<u>3</u>	IET223 <b>or</b> ARL121 <b>or</b> ARL122
		<b>6-7</b>	
<u>Eighth Semester</u>			
COM121	Effective Speaking	3	
<b>or</b>	<b>or</b>	<b>or</b>	
COM123	Small Group Communication <sup>^</sup>	3	IDS102 <b>or</b> Proficiency
AIT226	Robotic Vision	2	AIT220
<i>Arts &amp; Humanities and/or Social &amp; Behavioral Sciences Elective<sup>1</sup></i>		<u>3</u>	<i>Check for prerequisites</i>
		<b>8</b>	
	<b>TOTAL CREDITS</b>	<b>63-64</b>	

<sup>^</sup>Based on SSC placement scores

<sup>^^</sup>To promote student success, this course should be taken in the first semester

<sup>1</sup>*Arts & Humanities and/or Social & Behavioral Sciences Electives: ENG233, ENG234, ENG236, ENG237, PHL122, any HIS course, any SOC course, or any PSY course.*