

**PROGRAM: Mechatronics Engineering Technology – AMT (NCFAME), AAS A40350AM Advising Guide
Limited Entry**

FALL SEMESTER I					
8 Weeks Session 1	8 Weeks Session 2	16 Weeks Full Term	Course	Credit Hours	Program Notes
X			HYD-110 – Hydraulics/Pneumatics I	3	Fall Only
X			MAT-171 – Precalculus Algebra <i>Pre-req: MAT 003 (Grade P2) or MAT-035; co-req MAT-045P if needed</i>	4	
	X		ELC-131 – Circuit Analysis I <i>Pre-requisite: MAT-003 (P2 grade)</i>	4	Fall Only
	X		ELC-132 – Electrical Drawings	2	Fall Only
		X	ENG-111 – Writing and Inquiry <i>Pre-req ENG-002 or ENG-025; Co-req ENG-045 if needed</i>	3	Fall Only
		X	ISC-110 – Workplace Safety	1	Fall Only

SPRING SEMESTER I					
8 Weeks Session 1	8 Weeks Session 2	16 Weeks Full Term	Course	Credit Hours	Program Notes
X			ELC-117 – Motors and Controls <i>Pre-requisite: ELC-112, ELC-131, or AHR-111</i>	4	Spring Only
X			CIS-110 – Introduction to Computers	3	
	X		MEC-130 – Mechanisms	3	Spring Only
	X		PHY-131 – Physics – Mechanics <i>Pre-requisite: C or better in MAT-121 or MAT-171</i>	4	Spring Only
		X	ISC-114 Visual Workplace Organization/5S	1	Spring Only
		X	WBL-112 Work-based Learning I	2	Spring Only

SUMMER SEMESTER					
8 Weeks	10 Weeks	Course	Credit Hours	Program Notes	
	X	ATR-112 – Introduction to Automation	3	Summer Only	
	X	ISC-116 – Lean Manufacturing Principles and Practices	1	Summer Only	
	X	MAC-118 – Machine Shop Basic	2	Summer Only	
	X	PSY-150 – General Psychology <i>Pre-requisite: DRE-097 or ENG-002</i>	3		
	X	WLD-112 – Basic Welding Processes	2	Summer Only	

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FALL SEMESTER II					
8 Weeks Session 1	8 Weeks Session 2	16 Weeks Full Term	Course	Credit Hours	Program Notes
X			ELC-128 – Introduction to Programmable Logic Controllers <i>Pre-requisite: ELC-117</i>	3	Fall Only
X			ELC-213 – Instrumentation <i>Pre-requisite: MAT-121 or MAT-171 and ELC-112 or ELC-131</i>	4	Fall Only
	X		ELC-130 – Advanced Motors and Controls <i>Pre-requisite: ELC-111, ELC-112, ELC131, or ELC138 and ELC-117</i>	3	Fall Only
	X		HUM-115 – Critical Thinking <i>Pre-requisite: DRE-098, ENG-002, ENG-111 or BSP-4002</i>	3	
	X		HYD-180 – Fluid Power in Automation	3	Fall Only
		X	ISC-160 – Problem-Solving Skills for Advanced Manufacturing Technicians	1	Fall Only

SPRING SEMESTER II					
8 Weeks Session 1	8 Weeks Session 2	16 Weeks Full Term	Course	Credit Hours	Program Notes
X			ATR-212 – Industrial Robotics <i>Pre-requisite: ELN-131 and ELN-260-or ELC-128</i>	3	Spring Only
X			COM-120 – Introduction to Interpersonal Communication <i>Pre-req ENG-002 or ENG 025</i>	3	
	X		ELC-228 – PLC Applications <i>Pre-requisite: ELN-260 or ELC-131 and ATR-112 and ELC-128</i>	4	Spring Only
		X	ATR-114 – Machine Reliability	1	Spring Only
		X	WBL-212 – Work-based Learning IV	2	Spring Only
		X	ATR-210 – Introduction to Industry 4.0	1	Spring Only