

Mikron Facts:

Mikron is a Swiss based company that values apprentices and apprenticeship programs. Mikron Denver's apprenticeship program is U.S. Department of Labor approved and has been in operation since 2016.

Mikron Denver is a precision manufacturing company that manufactures high tech, automated assembly lines used in the production of extremely complex devices.

Industries using Mikron machines include medical device, pharmaceutical, electrical/industrial, automotive and consumer goods.

Mikron Manufacturing Technician Apprenticeship Details:

This apprenticeship provides training and education in knowledge areas commonly found in Automation industries: These include pneumatics, electricity, mechanisms, machining, and mechanical assembly.

Upon completion of the program, apprentices are awarded a nationally recognized certification and an Engineering Manufacturing Certificate from the Metropolitan State University of Denver.

Mikron Apprenticeship Facts

1. Apprenticeships allow you to learn while getting paid.
2. Gain industry recognized qualifications.
3. Gain hands on experience in fields such as pneumatics, mechatronics, and automation.
4. Attend college classes without paying tuition.

Apprenticeship Facts

1. Since 2012, over 2 million apprentices have registered with the D.O.L.
2. 396,000 apprentices have completed their program in the last 5 years
3. 14,700 new apprenticeship programs have been created in the last 5 years
4. Nationwide, as of Sept. 2021, there were over 593,000 apprentices in the workforce
5. As of December 2021, Colorado has 5,540 active apprentices and 2,647 new apprentices

Industrial Manufacturing Technician Pre-Apprenticeship Activities:

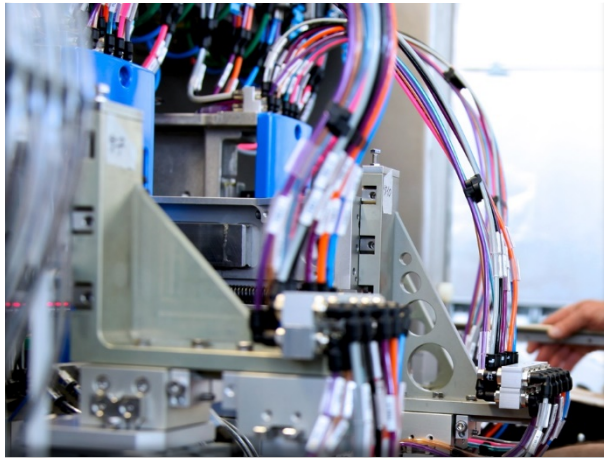
During the summer between the junior and senior year of high school, students must apply for a position in the paid summer internship program.

Of the summer internship participants, four interns will be selected to participate in the formal apprenticeship program, beginning August 2024.

The Summer Internship program runs from June 3, 2024, to July 12, 2024. (Dates are subject to change.)

Interns are required to work three days per week and must be present for the entire session.

Workdays are Tuesday, Wednesday, and Thursday.



Industrial Manufacturing Technician
Activities

1. Read and interpret engineering drawings
2. Assemble complex mechanical devices / systems
3. Assemble complicated pneumatic systems
4. Problem system errors found in advanced electropneumatic systems

Requirements / Program Details – Industrial Manufacturing Technician Apprenticeship

1. Students must have completed the summer internship and be invited to join the apprenticeship program. (Internship between Junior and Senior year in high school.)
2. During the apprentice's senior year of high school, they must be able to work on site at least 2 afternoons per week.
3. Applicants must have at least a 2.0 G.P.A. when entering the program
4. Students must provide their own transportation to and from Mikron.
5. Apprentices must enroll for college / university coursework for the Fall semester of the first academic year following high school graduation.

Contact Information:

If you have any questions,
please email Ross Ericson at:

ross.ericson@mikron.com



Education and training – Industrial Manufacturing Technician Apprenticeship

1. Apprentices must complete a specified number of college credits to complete the apprenticeship. (See information below.)
2. Required courses are offered at either the Advanced Manufacturing Sciences Institute located on the Metropolitan State University of Denver campus OR at the Douglas County School District Legacy Campus.
3. Mikron Denver pays for all tuition costs for required courses at both institutions.
4. Minimum of 3000 hours of On-the-Job Learning (OJL).

**Required courses for the
Industrial Manufacturing Technician Apprenticeship
Metropolitan State University of Denver**

MSU Advanced Manufacturing Sciences Institute / Mikron			
Industrial Manufacturing Technician Apprenticeship			
Course Title	Course Code	Course Credits	Content Hours
Semester #1 (August - December)			
Composing Arguments	ENG 1010	3	67.5
College Algebra for Calculus	MTH 1110	4	90.0
Professional Internship - Mikron Internship	AMS 4950	3	67.5
Semester #2 (January - May)			
Survey of Advanced Manufacturing	AMS 1010	3	67.5
Manufacturing Processes	MET 1010	3	67.5
OR			
Manufacturing Materials and Processes	IND 2830	3	67.5
Principles of Quality Assurance	MET 1310	3	67.5
Semester #3 (August - December)			
Manufacturing Analysis	MET 3000	3	67.5
Elective (Choose from list below)		3	67.5
Semester #4 (January - May)			
Lean Manufacturing Systems Engineering	MET 3630	4	90.0
Elective (Choose from list below)		3	67.5
	Total Credits	28	630.0

MSU Advanced Manufacturing Sciences Institute Electives	
CET 1215 - Engineering Graphics	MET 1200 Technical Drawing 1
EET 1001 - Electronics: An Introduction	MET 1210 - 3D Modeling
IND 1450 - Technical Drawing and CAD	MET 2010 - Machining and Inspection
IND 3000 - Design Thinking	JMP 2610 - Introduction to Technical Writing

**Required courses for the
Industrial Manufacturing Technician Apprenticeship
Arapahoe Community College Legacy Campus**

Arapahoe Community College / Mikron					
Industrial Mechanical Technician Apprenticeship					
Course Title	Course Code	Course Credits	Content Hours	Pre-Req. Course(s)	Pre-Req. Course(s)
Basic Workplace Skills	BUS 1021	1	22.67	None	
Technical Writing 1	ENG 1031	3	68	Placement	
Technical Mathematics	MAT 1150	4	90	Placement	
Conceptual Physics	PHY 1105	4	90	TESTING	
10-HR OSHA Voluntary Compliance	OSH 1300	1	22.67	None	
Fundamentals of DC/AC	ELT 1206	4	90	None	
Motors and Controls	ELT 2252	3	68	ELT 1206	
Intro to Robotics	ELT 2367	1	22.67	ELT 1206	
Robotics Technologies	ELT 2368	3	68	ELT 1206	ELT 2367
Fluid Power	ELT 2455	3	68	None	
Total Credits		27	610.01		

NOTE: We have two educational options for apprentices: Metropolitan State University of Denver (MSU) and Arapahoe Community College (ACC). MSU class are offered at the Advanced Manufacturing Sciences Institute. ACC courses are offered at the Douglas County School District Legacy Campus.

Apprentices may select either option but are NOT ALLOWED to change between schools and may not combine classes from institutions once a decision has been made. Apprentices must declare which option they are choosing a minimum of 2 months before the beginning of the first semester of coursework.

Guidance: If the apprentice aspires to become an engineer after the apprenticeship concludes, we recommend they select the MSU Denver option. If an apprentice plans to focus on the hands-on work of a Mechanical Technician, we recommend the ACC option.