Companion Document to the:
Labor Market Information (LMI) Instructions & Guidance

Delaware Department of Education
Appendix: Labor Market Information (LMI) Review
Delaware CTE Program of Study Application

Table 1: LEA Information
(see instructions on page 2, LMI Instructions & Guidance Document)

Career Cluster:	Manufacturing
Career Pathway:	Logistics & Inventory Control
CTE Program of Study:	Manufacturing Logistics Technician
High School and LEA Name:	
County:	

Table 2: Labor Market Information (LMI) Benchmarks by Geographic Region
(see instructions on page 2, LMI Instructions & Guidance Document)

Region	Employment 2014	Employment Change 2012-22	Employment Growth 2012-22	Avg. Wage 2014
United States	132,588,810	15,628,000	10.8%	$46,440
Delaware	412,140	40,900	9.4%	$49,254
District of Columbia	674,650	57,930	7.7%	$78,580
Maryland	2,557,510	189,370	6.1%	$53,470
New Jersey	3,869,260	313,190	7.5%	$53,920
Pennsylvania	5,653,840	467,940	7.7%	$45,750
Virginia	3,648,490	534,210	13.5%	$50,750

Table 3: LMI by Career Cluster & Pathway
(see instructions on page 4, LMI Instructions & Guidance Document)

Cluster Code	Cluster/Pathway Title	High Skill	High Wage	High Demand	2012-2022 Employment 2014	2012-2022 Employment Change 2012-2022	2012-2022 Employment Growth 2012-2022	2012-2022 Average Wage 2014
13	**Manufacturing Career Cluster**		●	●	**25,143**	**1,886**	**7.5%**	**$43,324**
	Rank Select Career Cluster by the Following Categories ->				*(9 of 16)*	*(10 of 16)*	*(10 of 16)*	*(12 of 16)*
13.05	**Logistics & Inventory Control Pathway**				***TBD**	***TBD**	***TBD**	***TBD**
	Rank Select Career Pathway by the Following Categories ->				*(*# of 6)*	*(*# of 6)*	*(*# of 6)*	*(*# of 6)*
	Logistics & Inventory Control Pathway Pathway – Mid-Atlantic States				***TBD**	***TBD**	***TBD**	***TBD**
	Logistics & Inventory Control Pathway Pathway – United States				***TBD**	***TBD**	***TBD**	***TBD**
13.01	Production Pathway				12,909	798	6.0%	$36,685
13.02	Manufacturing Production Process Development Pathway	●	●		2,272	229	9.2%	$62,953
13.03	Maintenance, Installation & Repair Pathway	●	●	●	8,402	793	9.4%	$48,580
13.04	Quality Assurance Pathway				1,560	66	7.3%	$41,190
13.06	Health, Safety & Environmental Assurance Pathway				*TBD	*TBD	*TBD	*TBD

Table 3: LMI by Career Cluster & Pathway (Questions/Analysis)
(see instructions on page 5, LMI Instructions & Guidance Document)

1. How does the employment, the employment change, the employment growth rate, and the average wage for the identified career cluster compare to LMI for other clusters in the State of Delaware? Is the career cluster rated as high wage and high demand?

The Manufacturing Career Cluster ranks in the top ten (10) for employment, employment change, employment growth rate with a higher average wage ($43,324) in comparison to the Delaware all-industry statewide median wage ($37,490 in 2014). The career cluster is also rated as high wage and high demand.

2. How does the employment, the employment change, the employment growth rate, and the average wage for the identified career pathway compare to LMI at the cluster level? How does the identified pathway level LMI in Delaware compare to the pathway level LMI in the Mid-Atlantic and/or the United States? How does the identified pathway level LMI in Delaware compare to the other pathway level LMI in Delaware?

The employment growth for the cluster is less than the pathway. However, pathway is on par with the overall growth rate in Delaware and the pathway demand is greater when reviewing LMI for most of the Mid-Atlantic region. The average wage for the pathway is nearly $20,000 higher for the manufacturing production process development pathway than for the manufacturing career cluster. LMI data also demonstrates that both regionally and across the country there is a high demand for careers in the manufacturing cluster. There is also the potential for students who complete the program of study to enroll in related degree programs or seek employment in SOCs found throughout the entire manufacturing cluster.

**Note: LMI has not yet been fully aggregated at the cluster or SOC level by the EDEPS system researchers and developers for the manufacturing cluster. Specific LMI for the* health, safety and environmental assurance pathway as well as the *logistics and inventory control pathway was identified and determined based on relevant SOC data as listed in table 4.*

Table 4: LMI by Standard Occupation Code (SOC)
(see instructions on page 6, LMI Instructions & Guidance Document)

					2012-2022			
SOC Code	**Occupation Title**	**High Skill**	**High Wage**	**High Demand**	**Employment 2014**	**Employment Change 2012-2022**	**Employment Growth 2012-2022**	**Average Wage 2014**
11-3061	Management Analysts	●	●	●	2,256	297	12.1%	$84,540
51-1011	First-Line Supervisors of Production and Operating Workers	●	●		1,307	17	1.2%	$62,380
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators		●	●	710	50	8.4%	$58,710

43-5061	Production, Planning, and Expediting Clerks		●	●	382	43	6.2%	$52,200
53-6051	Transportation Inspectors				262	32	14.7%	$38,980
43-5071	Shipping, Receiving, and Traffic Clerks			●	1,918	118	5.8%	$32,090
53-7062	Laborers and Freight, Stock, and Material Movers, Hand			●	7,329	519	8.5%	$27,300
53-7064	Packers and Packagers, Hand			●	1,508	43	4.2%	$22,600
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand		●	●	N/A	45	9.3%	N/A

Table 4: LMI by Standard Occupation Code (SOC) (Questions/Analysis)

(see instructions on page 7, LMI Instructions & Guidance Document)

1. How closely related to the program of study are the identified occupations (SOCs)?

   The Transportation Inspectors, Management Analysts, First-Line Supervisors, SOCs are related to the program of study and have strong connections to post-secondary programs in the state. In addition, students who earn the Manufacturing Skills Standards Council (MSSC) certification for Manufacturing Logistics Technician can move directly into careers and advanced post-secondary programs to lead into the SOC's listed in table 4. The LMI and SOC review for Delaware further demonstrate additional connections to the SOC families of 11-0000 (Management Occupations), 43-0000 (Office and Administrative Support Occupations), 51-0000 (Production Occupations), and 53-0000 (Transportation and Material Moving Occupations). All of which are supported by EDEPS data for including additional occupational opportunities throughout the United States.

2. Are there adequate state-level projected job openings or employment growth projections at the occupation level to justify starting a new program of study? Do the occupations related to the program of study rank as high skill, high wage and/or high demand?

   The number of job openings projected for the cluster and pathway as well as the related SOCs will support a manufacturing logistics technician program of study. Nearly all related SOCs in the pathway are rated as high wage, high demand.

Table 5: LMI Supply Indicators by Secondary & Post-Secondary Levels
(see instructions on page 7, LMI Instructions & Guidance Document)

Program Code (CIP)	Program (CIP) Title	School	Program Completion/Enrollment 2010-11	2011-12	2012-13	2013-14
Total Secondary Programs of Study						
13.01	Manufacturing Logistics Technician	Colonial, NCC Votech, Woodbridge, Brandywine, Seaford	Program of study to begin in 2014-15 school year.			
Total Post-Secondary Programs of Study						
14.3701	Operations Research	Delaware Technical Community College-Stanton/Wilmington,	10	4	8	
15.0000	Engineering Technology, General	University of Delaware	14	17	16	
15.0403	Electromechanical Technology/ Electromechanical Engineering Technology	Delaware Technical Community College-Terry	2	5	0	
15.0805	Mechanical Engineering/Mechanical Technology/Technician	Delaware Technical Community College-Stanton/Wilmington	11	12	13	
49.0104	Aviation/Airway Management and Operations	Wilmington University	9	9	10	
52.0203	Logistics, Materials, and Supply Chain Management	Wilmington University	3	1	13	
52.0205	Operations Management and Supervision	University of Delaware	12	45	14	

Table 5: LMI Supply Indicators by Secondary & Post-Secondary Levels (Questions/Analysis)
(see instructions on page 9, LMI Instructions & Guidance Document)

3. How is the secondary program of study articulated to or in any way related to the identified post-secondary program(s)?

The manufacturing logistics technician program of study is a program that connects to several post-secondary degree and certification programs at both two- and four- year institutions of higher education. Specifically, the manufacturing logistics

technician program of study will prepare students for related study in the operations management post-secondary program at Delaware Technical Community College.

4. How does the annual completion data at the secondary and post-secondary level compare to the projected career pathway-related projected job openings in Table 4?

   As illustrated by the number of enrolled students, there is high interest in manufacturing logistics technician program at the postsecondary level. Therefore, a manufacturing logistics technician program of study at the secondary level will better prepare students with the skills and knowledge to enter post-secondary programs. This work will lead to students achieving articulated credit while in high school and lessening the amount of time required to enter the workforce.

Table 6: Other LMI Data Including Real-Time LMI (Questions/Analysis)

(see instructions on page 10, LMI Instructions & Guidance Document)

5. Are there additional LMI data (demand & supply) at the local, county, state, or Mid-Atlantic region that support starting a new program of study in this pathway? This includes additional occupations for which there is not an SOC, any other analysis of LMI data, and any additional information on demand & supply factors that influence employment which can include real-time labor market information.

   Real-Time LMI Report will be published in the fall of 2015.