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:	Science Technology Engineering & Mathematics
Career Pathway:	Engineering and Technology
CTE Program of Study:	Engineering (PLTW)
High School and LEA Name:	
County:	

Table 2: Labor Market Information (LMI) Benchmarks by Geographic Region
(see instructions on page 3, 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
15	**Science Technology Engineering and Mathematics**	•	•	•	7,875	572	8.8%	$96,928
	Rank Select Career Cluster by the Following Categories ->				*(14 of 16)*	*(13 of 16)*	*(8 of 16)*	*(1 of 16)*
15.01	Engineering & Technology	•	•		3,026	136	7.5%	$110,893
	Rank Select Career Pathway by the Following Categories ->				*(2 of 2)*	*(2of 2)*	*(2of 2)*	*(1of 2)*
	Engineering & Technology – Mid-Atlantic States	•	•		169,920	13,056	7.3%	$104,340
	Engineering & Technology – United States	•	•		1,414,580	82,700	5.8%	$100,884
15.02	Science & Mathematics	•	•	•	4,849	436	9.4%	$88,213

Questions: LMI by Career Cluster & Pathway Analysis
(see instructions on page 4, 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 Science Technology Engineering and Mathematics Career Cluster ranks in the top twelve (12) for employment, employment change, employment growth rate and average wage when compared to other clusters and is ranked first for average wage compared to all other clusters. The career cluster rating is high skill, 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?

Average wage is significantly higher at the career pathway level than at the cluster level, but employment growth rate, general employment and employment change numbers are noticeably lower. Salaries remain steady as you move out of the state of Delaware and into the Mid-Atlantic and United States region and employment, employment change and employment growth numbers remain high as well. Related pathways have lower (but still high) wage potential, but show slightly higher employment growth numbers within the state of Delaware.

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**
17-2112	Industrial Engineers	•	•	•	523	49	8.3%	$90,650
17-2141	Mechanical Engineers	•	•	•	721	63	8.5%	$96,670
11-9041	Architectural and Engineering Managers	•	•		493	17	4.3%	$145,980

Questions: LMI by Standard Occupation Code (SOC)
(see instructions on page 7, LMI Instructions & Guidance Document)

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

   The Industrial Engineer, Mechanical Engineer and Architectural and Engineering Managers SOCs are directly related to the program of study. Students involved in the program will have to complete Algebra II (preferably Pre-Calculus) and can achieve articulated credits at the University of Delaware, Delaware State University and/or Delaware Technical and Community College through the successful completion of all courses and associated exams.

4. Are there adequate state-level projected job openings or employment growth projections at the occupation level to justify starting a new program? 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 an engineering program of study. All related SOCs and the cluster and pathway are rated as high skill, high wage, and most are considered high demand jobs.

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						
15.01602	Engineering (3Cr PLTW)	NA				
15.01803	Engineering (6Cr PLTW)	NA				
Total Post-Secondary Programs of Study						
14.1901	Mechanical Engineering	University of Delaware	71	102	108	106
14.1001	Electrical and Electronics Engineering	University of Delaware	28	31	35	24
14.0701	Chemical Engineering	University of Delaware	34	48	63	52
15.0101	Architectural Engineering Technology/Technician	Delaware Technical Community College	21	22	19	24
15.0000	Engineering Technology	University of Delaware	15	14	17	16

Questions: LMI Supply Indicators by Secondary & Post-Secondary Levels
(see instructions on page 8, LMI Instructions & Guidance Document)

5. Is the Secondary Program articulated to or in any way related to the identified Post-Secondary Program(s)?

   The enginering program is articulated with the Delaware Technical Community College, Delaware State University and negotiation for advanced standing is occurring with the University of Delaware. Students who complete the computer science program will have the opportunity to directly enter employment or continue their education in various fields.

6. 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?

The engineering program in secondary schools will prepare students with the knowledge and abilities necessary to successfully participate in 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)

7. 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.