

**Department of Industrial and Systems Engineering,  
The University of Tennessee  
LEAN ENTERPRISE SYSTEMS SUMMER PROGRAM**

<b>Company name:</b>	DeRoyal	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Implant Manufacturing Value Stream Analysis		

**Area of the project:** Implants Manufacturing

**Description<sup>(1)</sup>:** Reduce average lead time of implantable products through the manufacturing facility by 10%.

Background: The implants manufacturing facility is dedicated to the production of high precision implantable stainless steel devices for use in trauma surgery. This facility has been operational for just over 2 years and is utilized to manufacture plates, screws, instruments, and trays. This state of the art facility houses numerous machine centers including CNC mills, lathes, and screw machines, EDM, welding, laser marking, etc. To date, no previous value stream analysis or lean implementations have been undertaken in this facility. This project will be a complex study of an entire operation to evaluate the current state of the process and to create a new future state which will result in increased product throughput. Expectations: 1. Fully map the current state manufacturing process from raw material to finished goods inventory; 2. Calculate lead time, TAKT time, value add %, etc. for current state; 3. Identify bottlenecks in the current manufacturing process; 4. Suggest a future state process that would result in an average lead time reduction of at least 10%.

1. Machines are difficult to move and realign but are not set in stone if a good justification can be made; 2. Resources are set to current levels and cannot be increased to handle a new future state; 3. Job functions; however, can be modified to better align current resources to needed functions; 4. Implant manufacturing is a highly regulated industry and any significant process changes will necessitate testing and revalidation of the process.

<b>Total employees:</b>	2000	<b>2012 NAICS code<sup>(2)</sup>:</b>	33911
<b>Company address:</b>	200 DeBusk Lane Powell, TN 37849	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	www.deroyal.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / M-F 8:00am -5:00 pm

(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.

(2) You can look up the company's area at <https://www.census.gov/eos/www/naics/>

(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.

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<b>Company name:</b>	Techmer PM	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Improve Efficiency of Maintenance Inventory Management System		

**Area of the project:** Maintenance and possibly IS and manufacturing

**Description<sup>(1)</sup>:** Currently, our maintenance inventory system is very manual and we often end up losing parts and have to re-order them only to find what we were looking for later. It is very challenging for us to keep track of what we have and what we need.

Our objective for this project is to develop or find a better system to keep track of our maintenance inventory stock and optimize our inventory purchases to reduce overall inventory capacity and reduce machine downtime due to lack of parts.

Closed toe shoes and pants will be required at all times because students will be working closely with areas in manufacturing.

<b>Total employees:</b>	600	<b>2012 NAICS code<sup>(2)</sup>:</b>	325211
<b>Company address:</b>	1 Quality Circle Clinton, TN 37716	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	techmerpm.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / 24 hour facility Monday - Friday Office staff hours: 8 am - 5 pm

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<b>Company name:</b>	East Tennessee Children's Hospital	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Sterile Processing Facility Design		
<p><b>Area of the project:</b> East Tennessee Children's Hospital is adding a 245,000 square foot \$75.3 million dollar expansion breaking ground summer of 2014. The project will focus on our new sterile processing department that has been designed to support all hospital instrument sterilization needs.</p> <p><b>Description<sup>(1)</sup>:</b> This team will work with hospital staff to validate the department's facility design, confirm space requirements, develop and research instrument tracking with current hospital IT system, and review process flow between sterile process and surgery departments.</p> <p>Students should be comfortable working in a hospital environment including interactions with patient and families, talking in depth with hospital employees, and being challenged in their thought process.</p> <p>Due to the nature of healthcare operations and surgery schedules, student working on this project may be ask to work very early mornings (as early as 5:30AM) to capture required data to complete their final report.</p> <p>All students involved with project work at East Tennessee Children's Hospital are required to complete a background check and drug test.</p>			
<b>Total employees:</b>	1900	<b>2012 NAICS code<sup>(2)</sup>:</b>	622110
<b>Company address:</b>	2018 Clinch Ave Knoxville, TN 37916	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	www.etch.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Hospital: 365/24/7 Lean Department: Monday through Friday 8AM-5PM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Carton Service Incorporated	<b>Division/Branch (if available):</b>	Pharma Packaging Solutions (PPS)
<b>Project name:</b>	Strategy for Serialization and Traceability 1/2		
<p><b>Area of the project:</b> Start up Pharma side of the business from inbound to shipping out of contract packaging of product. ( inbound, warehousing, packaging lines, shipping)</p> <p><b>Description<sup>(1)</sup>:</b> This will be a start up to gain ideas to comply with US and International requirements for serialization and traceability of drug product.</p> <p>Persons will be available to assist in each of the above areas from 7am to as needed. There will be assistance as late as 11pm. cGMP training will be given on the first day with any special instruction for safety, confidentiality, procedures.</p>			
<b>Total employees:</b>	95	<b>2012 NAICS code<sup>(2)</sup>:</b>	322212
<b>Company address:</b>	100 First Quality Drive Norris Tennessee 37828	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	pharmapacksol.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / Monday - Friday, 7:00 am - 11:00 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Advanced Catalyst Systems, LLC	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Manufacturing Efficiency for Large Order Quantities		

**Area of the project:** Manufacturing

**Description<sup>(1)</sup>:** ACS manufactures catalyst modules for power and industrial applications. Typical order quantities vary from 2 to 20 modules. Once a year we receive a purchase order for 300 to 500 modules; hence, we would like to examine options for optimizing manufacturing and implement a program to improve production efficiency for such orders.

<b>Total employees:</b>	26	<b>2012 NAICS code<sup>(2)</sup>:</b>	325199
<b>Company address:</b>	304 Partnership Parkway Maryville, TN 37801	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	10
<b>Website(s):</b>	www.advancedcatalyst.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / 5:30 am - 3:00 pm

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<b>Company name:</b>	RF Concepts	<b>Division/Branch (if available):</b>	TEN-TEC
<b>Project name:</b>	Merging two companies		
<p><b>Area of the project:</b> the merging of two separate manufacturing companies and blend of manufacturing systems and processes</p> <p><b>Description<sup>(1)</sup>:</b> Each company has it's own manufacturing and accounting software as well as separate processes to manufacture it's products how best to blend these processes and implement lean principals in the blended company.</p>			
<b>Total employees:</b>	30	<b>2012 NAICS code<sup>(2)</sup>:</b>	334220
<b>Company address:</b>	1185 Dolly Parton Parkway Sevierville, TN 37862	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	17
<b>Website(s):</b>	www.tentec.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / Monday-Friday 8 am to 4:30 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Vynlex Corporation	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Setup/Changeover Reduction 1/2		
<b>Area of the project:</b> Plastic Manufacturing production floor - extrusion process <b>Description<sup>(1)</sup>:</b> Analyze and determine opportunities to reduce die changeover times from job to job			
<b>Total employees:</b>	65	<b>2012 NAICS code<sup>(2)</sup>:</b>	326121
<b>Company address:</b>	2636 Byington-Solway Road Knoxville, TN 37931	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	24
<b>Website(s):</b>	Vynlex.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Monday - Friday 7:30 Am - Saturday 7:30 AM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Aqua-Chem	<b>Division/Branch (if available):</b>	Water
<b>Project name:</b>	Stock levels/Reorder Point/EOQ/Forecasting tools		
<p><b>Area of the project:</b> Warehouse/Purchasing</p> <p><b>Description<sup>(1)</sup>:</b> Develop tools to better forecast future demand, when actual consumption has high variances. Evaluate stock data to determine the optimal stocking levels, and EOQ.</p> <p>Statistical analysis, office suite.</p>			
<b>Total employees:</b>	165	<b>2012 NAICS code<sup>(2)</sup>:</b>	333318
<b>Company address:</b>	3001 E Gov. John Sevier Hwy PO box 14824 Knoxville TN 37914	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	15
<b>Website(s):</b>	www.aqua-chem.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / Mon-Fri, 6:00AM - 11:00PM Office, 7:30AM - 4:30PM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			



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<b>Company name:</b>	MasterCraft Boat Company	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Value Stream Map - Lamination		
<p><b>Area of the project:</b> Lamination Building which includes Mold Prep, Taping, Gel Coating, Lamination, Liner Set, Grinding</p> <p><b>Description<sup>(1)</sup>:</b> Develop a current state Value Stream Map for the Lamination Process and a future state for an increase in production.</p>			
<b>Total employees:</b>	440	<b>2012 NAICS code<sup>(2)</sup>:</b>	336612
<b>Company address:</b>	100 Cherokee Cove Drive Vonore, TN 37885	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	www.mastercraft.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / Mon-Thur 6:15 am - 4:45 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Johnson Matthey Inc.	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Melt Area Material Flow Improvement		
<p><b>Area of the project:</b> The project will be developed for the melt area within our facility.</p> <p><b>Description<sup>(1)</sup>:</b> Currently the melt area operation involves storage and movement of product in 3500 lb containers. Need to streamline the operation thereby minimizing the material movement and optimizing the use of floor space.</p> <p>The work in this area takes place between 6 Am and 2 PM normally. No specific background is necessary for evaluating this project. Knowledge of standard lean tools should be sufficient. The work area is hot in summer. Standard safety requirements.</p>			
<b>Total employees:</b>	43	<b>2012 NAICS code<sup>(2)</sup>:</b>	325180
<b>Company address:</b>	1246 Airport Road, Sevierville, TN 37862	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	15
<b>Website(s):</b>	www.jmprotech.com/	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Sunday 11:00 PM to Friday 11:00 PM, 24 x 5
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Carlex Glass Company	<b>Division/Branch (if available):</b>	Vonore Facility
<b>Project name:</b>	Cycle Time reduction for rain sensor application process		
<p><b>Area of the project:</b> WS production line</p> <p><b>Description<sup>(1)</sup>:</b> Current process cycle time is 23 sec. Added new rain sensor bracket process. Cycle time 38 sec. Need to reduce cycle time to 23 sec.</p> <p>Participant students must bring their own steel toe shoes.</p>			
<b>Total employees:</b>	400	<b>2012 NAICS code<sup>(2)</sup>:</b>	327215
<b>Company address:</b>	77 Excellence Way Vonore, TN 37885	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	42
<b>Website(s):</b>	Carlex.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / 2 - 12 hour shifts per day 2-3-2 work day schedule (24/7 operation)
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<b>Company name:</b>	Reily Foods Co	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Mayo Capacity Increase		
<p><b>Area of the project:</b> Mayo department</p> <p><b>Description<sup>(1)</sup>:</b> Sales of mayo products are forecasted to increase over the next 3 years. The increase will be driven by increased market share in current customers and geographic areas as well as expansion into new geographic areas with new customers.</p> <p>This project will include analysis of financial information as well as analysis of current production constraints to determine the best business decision for increasing capacity. Appropriate analysis will include an understanding of current costs and constraints as well as thorough investigation proposed costs of capacity increases - including capital and variable cost possibilities. Analysis will also account for possible growths of 25%, 50%, and 75% and the resulting possible and best options.</p>			
<b>Total employees:</b>	400	<b>2012 NAICS code<sup>(2)</sup>:</b>	311920
<b>Company address:</b>	3434 Mynatt Avenue Knoxville, TN 37919	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	www.reilyfoods.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	<p>3 / The plant has varying shifts depending on production line.</p> <p>The Family Tea department works 5 days x 3 8-hour shifts.</p> <p>The Instant Coffee department, Coffee Roast &amp; Grind, and Gallon Tea line work 4 days x 2 10-hour shifts.</p> <p>The Coffee packaging lines, Gourm</p>
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	DeRoyal	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Implant Consignment Capital Allocation Analysis		

**Area of the project:**

**Description<sup>(1)</sup>:** Increase utilization of consigned capital in the clinical setting by 5%. Background: Inventory management and set allocation are two of the most complex and challenging aspects of any implant operation. Implants are sold in sets which include various sizes of implantable devices as well as instrumentation used to implant the devices during surgery. These highly specialized sets can cost from \$50,000 - \$150,000 each depending on the amount of inventory in each set. In the hospital setting, these sets are consigned (given to the hospital to borrow) and the device company only charges the customer for products used. This results in a real cash-flow problem for many companies as a hospital may have 2-10 sets on hand for surgery with the implant company holding the inventory burden until an implant is used in surgery. Therefore, one area of concern is how often the sets are being utilized in each member hospital and how to evaluate whether their usage justifies continued consignment or whether the set needs to be re-allocated to a different facility. This project will require students to evaluate the current consignment/loaner program and identify areas of improvement for quicker, more effective, set allocation decisions. Expectations: 1. Fully map the current state process of inventory management; 2. Create metrics to measure inventory utilization; 3. Work with team to create goals around metrics; 4. Suggest a future state process that would result in an average increase of assets of 5%.

1. This process has direct impact on customers which should be considered during the project; 2. Resources are set to current levels and cannot be increased to handle a new future state; 3. Job functions; however, can be modified to better align current resources to needed functions

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<b>Company address:</b>	200 DeBusk Lane Powell, TN 37849	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	www.deroyal.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / M-F 8:00am -5:00 pm

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<b>Company name:</b>	Techmer PM	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Analyze and Reduce Expedited Freight Charges		
<p><b>Area of the project:</b> Accounting and Logistics Groups</p> <p><b>Description<sup>(1)</sup>:</b> We would like to analyze our expedited freight, both inbound and outbound. This freight could include items such as documents and parts to finished goods products.</p> <p>We would like to understand where we are spending money on expediting items. This would include looking at which customers request expedited items most frequently, if the item that was expedited needed to be expedited, what types of products are expedited most frequently, and if there are lower cost options.</p> <p>The overall objective of this project is to better understand our expediting and to reduce the number of items that are expedited as well as the cost of expediting them.</p> <p>Closed toe shoes and pants will be required.</p>			
<b>Total employees:</b>	600	<b>2012 NAICS code<sup>(2)</sup>:</b>	325211
<b>Company address:</b>	1 Quality Circle Clinton, TN 37716	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	techmerpm.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / 24 hour facility Monday - Friday Office staff hours: 8 am - 5 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	East Tennessee Children's Hospital	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Surgical Service Staffing Model		
<p><b>Area of the project:</b> East Tennessee Children's Hospital is adding a 245,000 square foot \$75.3 million dollar expansion breaking ground summer of 2014. The team will focus on the new surgery department that has been designed to combine patient registration, outpatient surgery prep, operating rooms, and PACU departments on one floor to improve efficiency and the patient experience.</p> <p><b>Description<sup>(1)</sup>:</b> This team will work with hospital staff to determine the optimal staffing model needed to meet the requirement of our patient and providers based on current surgery scheduling practices. Additionally the team will analyze the current schedule and patient demands levels through simulation software to support their staff scheduling recommendation.</p> <p>Students should be comfortable working in a hospital environment including interactions with patient and families, talking in depth with hospital employees, and being challenged in their thought process.</p> <p>Due to the nature of healthcare operations and surgery schedules, student working on this project may be ask to work very early mornings (as early as 5:30AM) to capture required data to complete their final report.</p> <p>All students involved with project work at East Tennessee Children's Hospital are required to complete a background check and drug test.</p>			
<b>Total employees:</b>	1900	<b>2012 NAICS code<sup>(2)</sup>:</b>	622110
<b>Company address:</b>	2018 Clinch Ave Knoxville, TN 37916	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	www.etch.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Hospital: 365/24/7 Lean Department: Monday through Friday 8AM-5PM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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LEAN ENTERPRISE SYSTEMS SUMMER PROGRAM**

<b>Company name:</b>	Carton Service Incorporated	<b>Division/Branch (if available):</b>	Pharma Packaging Solutions (PPS)
<b>Project name:</b>	Strategy for Serialization and Traceability 2/2		
<p><b>Area of the project:</b> Start up Pharma side of the business from inbound to shipping out of contract packaging of product. ( inbound, warehousing, packaging lines, shipping)</p> <p><b>Description<sup>(1)</sup>:</b> This will be a start up to gain ideas to comply with US and International requirements for serialization and traceability of drug product.</p> <p>Persons will be available to assist in each of the above areas from 7am to as needed. There will be assistance as late as 11pm. cGMP training will be given on the first day with any special instruction for safety, confidentiality, procedures.</p>			
<b>Total employees:</b>	95	<b>2012 NAICS code<sup>(2)</sup>:</b>	322212
<b>Company address:</b>	100 First Quality Drive Norris Tennessee 37828	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	pharmapacksol.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / Monday - Friday, 7:00 am - 11:00 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			



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<b>Company name:</b>	RF Concepts	<b>Division/Branch (if available):</b>	TEN-TEC
<b>Project name:</b>	Lean at TEN-TEC		
<p><b>Area of the project:</b> Final assembly and test of electronics products</p> <p><b>Description<sup>(1)</sup>:</b> TEN-TEC will be moving to a new facility and we need to implement lean manufacturing principals in the new facility. We need to study how products are assembled today and model a new process for the future location of the manufacturing operation.</p>			
<b>Total employees:</b>	30	<b>2012 NAICS code<sup>(2)</sup>:</b>	334220
<b>Company address:</b>	1185 Dolly Parton Parkway Sevierville, TN 37862	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	17
<b>Website(s):</b>	www.tentec.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / Monday-Friday 8 am to 4:30 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Vynlex Corporation	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Setup/Changeover Reduction 2/2		
<b>Area of the project:</b> Plastic Manufacturing production floor - extrusion process <b>Description<sup>(1)</sup>:</b> Analyze and determine opportunities to reduce die changeover times from job to job			
<b>Total employees:</b>	65	<b>2012 NAICS code<sup>(2)</sup>:</b>	326121
<b>Company address:</b>	2636 Byington-Solway Road Knoxville, TN 37931	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	24
<b>Website(s):</b>	Vynlex.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Monday - Friday 7:30 Am - Saturday 7:30 AM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Aqua-Chem	<b>Division/Branch (if available):</b>	Water
<b>Project name:</b>	Standardized part number/description system		
<p><b>Area of the project:</b> Engineering, warehouse</p> <p><b>Description<sup>(1)</sup>:</b> Expand on prior project. Outline key elements of descriptions to standardize how parts are created in the MRP system. Create a tool to work with the MRP system to create new parts and/or improve current part descriptions.</p> <p>Excel, MS Access</p>			
<b>Total employees:</b>	165	<b>2012 NAICS code<sup>(2)</sup>:</b>	333318
<b>Company address:</b>	3001 E Gov. John Sevier Hwy PO box 14824 Knoxville TN 37914	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	15
<b>Website(s):</b>	www.aqua-chem.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / Mon-Fri, 6:00AM - 11:00PM Office, 7:30AM - 4:30PM
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	MasterCraft Boat Company	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Value Stream Map - Assembly		
<p><b>Area of the project:</b> Assembly Building.</p> <p><b>Description<sup>(1)</sup>:</b> Develop current state Value Stream Map for Assembly Building and a future state VSM with increased production.</p>			
<b>Total employees:</b>	440	<b>2012 NAICS code<sup>(2)</sup>:</b>	336612
<b>Company address:</b>	100 Cherokee Cove Drive Vonore, TN 37885	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	20
<b>Website(s):</b>	www.mastercraft.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	1 / Mon-Thur 6:15 am - 4:45 pm
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Johnson Matthey Inc.	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	PM Area Work Flow Improvement		
<p><b>Area of the project:</b> The project will be developed in our carbon catalyst manufacturing area.</p> <p><b>Description<sup>(1)</sup>:</b> Carbon catalyst is manufactured at our site. The raw material is moved from the warehouse to the production area. The carbon catalyst is manufactured, filtered in a centrifuge, analyzed and then packaged. A through evaluation of this manufacturing process would be conducted to streamline the process flow and recommendations to be made to improve the process.</p> <p>The operation is carried out between 6 AM and 2 PM Monday to Friday. Chemical background is helpful but not necessary. Students should be comfortable working in a chemical manufacturing area. Standard safety procedures are applicable.</p>			
<b>Total employees:</b>	43	<b>2012 NAICS code<sup>(2)</sup>:</b>	325180
<b>Company address:</b>	1246 Airport Road, Sevierville, TN 37862	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	15
<b>Website(s):</b>	www.jmprotech.com/	<b>Shifts/Schedule<sup>(3)</sup>:</b>	3 / Sunday 11:00 PM to Friday 11:00 PM, 24 x 5
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Carlex Glass Company	<b>Division/Branch (if available):</b>	Vonore Facility
<b>Project name:</b>	Establish FIFO flow for finished goods warehouse		
<p><b>Area of the project:</b> Finished goods/shipping</p> <p><b>Description<sup>(1)</sup>:</b> Carlex has over 67 current model parts. Production cycle is every two weeks to once per month. Current system allows for material to not be FIFO'd.</p> <p>Participant students must bring their own steel toe shoes.</p>			
<b>Total employees:</b>	400	<b>2012 NAICS code<sup>(2)</sup>:</b>	327215
<b>Company address:</b>	77 Excellence Way Vonore, TN 37885	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	42
<b>Website(s):</b>	Carlex.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	2 / 2 - 12 hour shifts per day 2-3-2 work day schedule (24/7 operation)
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			

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<b>Company name:</b>	Reily Foods Co	<b>Division/Branch (if available):</b>	
<b>Project name:</b>	Family Tea Improvement		
<p><b>Area of the project:</b> Family Tea production lines</p> <p><b>Description<sup>(1)</sup>:</b> Use lean principles to analyze current production process including cost and constraint drivers and propose appropriate production improvements.</p> <p>This product line is the main revenue generator for the company, and has tremendous potential for profitability improvement through application of lean principles.</p>			
<b>Total employees:</b>	400	<b>2012 NAICS code<sup>(2)</sup>:</b>	311920
<b>Company address:</b>	3434 Mynatt Avenue Knoxville, TN 37919	<b>Total number of available working days during the program<sup>(3)</sup>:</b>	16
<b>Website(s):</b>	www.reilyfoods.com	<b>Shifts/Schedule<sup>(3)</sup>:</b>	<p>3 / The plant has varying shifts depending on production line.</p> <p>The Family Tea department works 5 days x 3 8-hour shifts.</p> <p>The Instant Coffee department, Coffee Roast &amp; Grind, and Gallon Tea line work 4 days x 2 10-hour shifts.</p> <p>The Coffee packaging lines, Gourm</p>
<p>(1) Descriptions provided by the contacts at the companies, you'll have to work more on the problem definition in all cases, since your "symptoms" might lead you to different issues or objectives.</p> <p>(2) You can look up the company's area at <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a></p> <p>(3) Information provided by the company, the total number of days/shifts the facility will be open during the days assigned for the program. You'll get your schedule from the team leader once you are assigned to one team.</p>			