**Summer School Project SPL (Simulation Production and Logistics)**

The goal of the Summer School Project SPL (Simulation Production and Logistics) is learning to understand Production and Logistics as a system with its characteristics and constraints, with its dependencies as well as the interaction of capacities and availability of resources (material, equipment, machining and workforce).

To achieve this overall goal the Tecnomatix Plant Simulation will be used as a software tool. In the first phase of the Summer School you are learning going through a tutorial with examples and exercises how to create your own models and how to run simulation experiments as planning scenarios. For setting up these simulation models the existing standard elements of the Plant Simulation toolbox and some simple programming of user-defined methods will be used.

In the second phase of the Summer School you are working in an international team of usually 3 to 4 German and US students creating a simulation model of a production system based on its description and the layout of it with the task to modify the system step by step in order to optimize the output.

Tecnomatix Plant Simulation is an event driven simulation software tool to create digital models of logistic and production systems. The Plant Simulation tool can be used in the planning phase and also for existing running production systems to fully understand the characteristics of complex production systems in order to optimize the overall performance and efficiency of the system. The Plant Simulation tool provides an extensive library of standard objects for machines, equipment, materials, workforce and analysis tools, such as statistics, spreadsheets, charts and bottleneck analysis. This to effectively create plant models for the use in Industrial and Manufacturing Engineering without the need being an expert in programming.