Lean Construction challenges all project stakeholders to develop and apply better ways to manage the overall construction process. **Unit 1: Variation in Production Systems** is a half-day course that introduces one of the foundational concepts of Lean Construction, variation.

In the construction process, the work we do is all connected and variation in even one of those processes affects us all. This course provides tools to help participants recognize sources of variation on their own projects, examine variation’s effect on operations, and mitigate the effects of variation in their every-day work. Following completion of this course, participants will have the ability to:

- Define the different types of variation
- Explain the concept of throughput and distinguish it from productivity
- Discuss the role of variation in production operations
- List sources of variation in construction settings
- Explain and contrast variation mitigation techniques

**About AGC’s Lean Construction Education Program**

To develop the tools needed to build lean, the Associated General Contractors of America (AGC) has developed the Lean Construction Education Program. Construction professionals at all experience levels will learn the building blocks necessary to transform their projects and companies into a lean operating system.

AGC’s Lean Construction Education Program is a series of courses that progressively cover a range of topics essential to Lean Construction, including:

- Variation and pull in production
- Lean workstructuring, supply chains, and assembly
- Production management
- Management by values
- Problem-solving principles and tools

http://www.agcwi.org/cm-lean.html

Questions contact
Jim Falbo: jim.falbo@agcwi.org
or ph: 608.221.3821
UNIT 2: PULL IN PRODUCTION

Lean Construction challenges all project stakeholders to develop and apply better ways to manage the overall construction process. Unit 2: Pull in Production is a half-day course that introduces concept of pull as a means to reliable workflow.

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- Compare batch-and-queue and continuous-flow production systems
- Distinguish push systems from pull systems
- Describe the impact of pull on production systems
- Explain pull strategies in construction operations

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UNIT 3: LEAN WORKSTRUCTURING

Lean Construction challenges all project stakeholders to develop and apply better ways to manage the overall construction process. Unit 3: Lean Workstructuring is a half-day course that introduces an essential component of the Last Planner® System, Lean Workstructuring.

Within construction, we all strive to plan our projects in a way that produces predictable workflow and continuous improvement. This course provides participants with the tools needed to apply Lean Workstructuring principles within the Last Planner® System. Following completion of this course, participants will have the ability to:

- Apply the methods and tools utilized in pull planning
- Describe the concept of Lean Workstructuring
- Outline the desired products of Lean Workstructuring
- Describe the characteristics and application of the Last Planner® System

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NON MEMBER RATE: $445/UNIT
AGC OF WISCONSIN
4814 E. BROADWAY, MADISON, WI 53716
AGC’s Lean Construction Education Program

UNIT 4: THE LAST PLANNER® SYSTEM

Lean Construction challenges all project stakeholders to develop and apply better ways to manage the overall construction process. Unit 4: The Last Planner® System is a half-day course that delves in creating six-week look-ahead schedules and weekly work plans.

Within construction, we all strive to plan our projects in a way that produces predictable workflow and continuous improvement. Unit 4 is the second of two units introducing the Last Planner System (LPS). This half-day, facilitator-led course shows how to conduct make-ready and weekly work planning sessions. Following this course, participants will be able to:

- Apply the Last Planner® System on a project
- Hold make-ready and weekly work planning sessions
- Calculate, track and analyze percent plan complete for a project

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- The Last Planner® System
- Lean supply chains and assembly
- Lean design and pre-construction
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Quality People. Quality Projects.
UNIT 5: LEAN SUPPLY CHAIN AND ASSEMBLY

Lean Construction challenges all project stakeholders to develop and apply better ways to manage the overall construction process. Unit 5: Lean Supply Chain and Assembly is a full-day course that introduces the lean strategies and tools used to deliver materials, equipment and prefabricated assemblies to the jobsite in a manner that facilitates flow.

The four-session course challenges class participants to map the supply chain — looking to minimize waste and maximize value — in a collaborative fashion with all project team members, including suppliers and vendors.

Following this course, participants will be able to:
- Differentiate between traditional procurement practices and lean supply chain applications;
- Identify waste and value-adding activities within the supply chain and assembly;
- Evaluate the impact of using lean supply chain on waste elimination, continuous flow and site operations pull;
- Identify strategies needed at the project and company levels to support the lean supply chain;
- List examples of process improvements to the lean supply chain;
- Expand lean beyond the individual project; and
- Create a value stream map to diagnose and improve the supply chain.

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UNIT 6: LEAN DESIGN AND PRE-CONSTRUCTION

Unit 6: Lean Design and Pre-construction is a half-day, instructor-led course that explains the concepts of value-based management, lean in the design process and relational contracting. The course is divided into three sessions and teaches participants to:

- Distinguish between the varying definitions for design.
- Define value and commonly used methods to maximize it.
- Discuss waste and commonly used methods to minimize it.
- Differentiate between traditional project methods and lean design.
- Explain the various lean tools used in design and how to deploy them.

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Unit 7: Problem-solving Principles and Tools is a six hour, instructor-led course that describes the Lean Problem Solving Process and illustrates how to use tools to solve problems in a lean manner. The course is divided into three sessions and teaches participants to:

- Explain the Lean Problem Solving Process.
- Use tools to solve problems in a lean manner.
- Describe how to solve problems in a team.
- Use an A3 as a problem solving and communication tool.
- Describe the use of the other tools available for problem solving.

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- Pull in Production
- Lean Workstructuring
- The Last Planner® System (LPS)
- Lean Supply Chain and Assembly
- Lean Design and Pre-construction
- Problem-solving Principles and Tools

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