



## Lean Certification Program Process Improvements

### New Information to Guide You

To improve upon the customer experience and continued success of the Lean Certification program, an extensive validation study was conducted utilizing the Plan-Do-Check-Act cycle. The Lean Certification Alliance listened to feedback from customers, reviewed the results and recommendations from the validation study, and took action by implementing new process improvements.

Lean Certification candidates will encounter a more streamlined process in achieving certification. The hierarchical requirements — Bronze, then Silver, then Gold — has been eliminated. This allows candidates to obtain certification at the rank that is most appropriate to their career, knowledge, and experience.

The importance of demonstrating one's lean knowledge and skills to real-world situations will continue to be exhibited through a Portfolio for Lean Bronze candidates; however, the tactical project requirement has been decreased from five projects to three. Lean Silver and Lean Gold candidates will now exhibit their knowledge and skills through an Accomplishment Record — a method of demonstrating knowledge and skills to real-world situations. Candidates will find the amount of time and effort required to complete the Portfolio and Accomplishment Record more manageable. Candidates are still required to pass an exam as part of the overall certification process and Lean Gold candidates must also pass an interview with a team of Lean Certified professionals.

### New Lean Certification Blueprints

The new Lean Certification Blueprints provide additional useful information beyond the Body of Knowledge. Where the Body of Knowledge specifies the competencies, topics, and subtopics required by lean practitioners, the Blueprint goes a step further by specifying relevant segments of the Body of Knowledge providing additional detail on the proficiency expected for each certification rank.

### Lean Body of Knowledge

The foundation of the certification process is built upon the Lean Certification Body of Knowledge. For Lean Bronze Certification, you'll study and learn lean processes and practices from these key modules:

- Module 1: Cultural Enablers (15%)
- Module 2: Continuous Process Improvement (60%)
- Module 3: Consistent Lean Enterprise Culture (10%)
- Module 4: Business Results (15%)

### Essential Body of Work

An Essential Body of Work has been developed for each certification that describes tasks conducted by lean practitioners and lays the groundwork for understanding and evaluating Lean Certification requirements. This is beneficial in envisioning the role of a lean practitioner and to assist candidates in evaluating their readiness for the Lean Certification exam.



### Overview

Congratulations! You are taking an important step on your lean journey. The Lean Certification path offers you the opportunity to:

- Assess your personal progress
- Evaluate results you've achieved versus planned
- Reflect upon your experiences
- Identify personal growth and development opportunities
- Document your lean achievements

This document includes instructions for registering to take the competency exam, how to complete your Lean Bronze Portfolio, and critical information about the knowledge and competencies that should be demonstrated by a certification candidate. Please read this entire instruction set before starting your Portfolio work.

The [Association for Manufacturing Excellence](#) (AME), the [Shingo Institute](#), and [SME](#) have partnered to facilitate industry-based, leading lean practitioners in the development of this new standard. The standard assesses your lean knowledge (exam), the application of that knowledge (Portfolio), and the mentoring and coaching of others. Three ranks of Lean Certification are available (Bronze, Silver, and Gold).

**Lean Bronze Certification is focused on tactical lean.** Tactical lean is the deployment and application of basic lean principles, concepts and methods locally, within a work cell, work group or value stream. This may be a workshop or a project focused implementation of specific lean concepts or techniques.

**For purposes of this certification, a value stream is defined as the “integration of processes which create, produce, and deliver a good or service to the customer or market.”**

#### NOTE:

**You must have taken and passed the Lean Bronze exam before submitting your Portfolio for review.**

**You are NOT considered LEAN BRONZE CERTIFIED until you have passed both the exam and the Portfolio requirements.**



## Steps toward Earning Lean Bronze Certification

- STEP 1** Assess Your Knowledge and Experience
- STEP 2** Read the Core Reference Material
- STEP 3** Evaluate Your Lean Knowledge
- STEP 4** Apply for Lean Bronze Certification
- STEP 5** Schedule and Take the Exam
- STEP 6** Submit Your Lean Bronze Portfolio
- STEP 7** Plan Your Next Steps

### STEP 1: Assess Your Knowledge and Experience

To earn the Lean Bronze Certification, you must demonstrate your understanding of the Lean Certification [Body of Knowledge](#) by passing the [Lean Bronze Certification Exam](#), for which you'll receive a Lean Knowledge Certificate. To become certified, you must further demonstrate your lean training and development by creating a Lean Bronze Portfolio that contains three tactical projects and activities.

You should understand the basics of lean, including:

- Autonomation (jidoka)
- Cells, one piece flow
- Continuous improvement (kaizen)
- Cost, productivity results
- Customer demand pace (takt time)
- Customer requirements, satisfaction
- Distribution, logistics, delivery
- Flow
- Identifying value added/non-value added work
- Identifying waste
- Lean product design
- Load leveling/production leveling (heijunka)
- Mistake proofing (poka-yoke)
- Plan-Do-Check-Act cycle (PDCA)
- Problem solving (5 Whys)
- Pull systems (kanban)
- Quality methods
- Quick changeover, setup reduction
- Root cause, corrective action
- Standard work
- Total productive maintenance (TPM)
- Value stream mapping
- Visual factory

Visit [sme.org/prepare](http://sme.org/prepare) for additional information and preparation resources. You may want to consider finding a mentor as you begin your lean journey. This is an informal relationship between you and someone with advanced lean knowledge and experience. Look to find a mentor within your own company, [Association for Manufacturing Excellence](#) (AME) leaders in your area, or, if you are an [SME member](#), your [local chapter](#) may be a good resource.



## STEP 2: Read the Core Reference Material

Exam questions are based on specific [Core Reference Material](#) selected by knowledgeable and experienced individuals. You can save 10% by purchasing the Lean Bronze Certification [book package](#), which includes:

- [Gemba Kaizen: A Commonsense Approach to a Continuous Improvement Strategy](#)
- [Lean Production Simplified: Plain-Language Guide to the World's Most Powerful Production System](#)
- [Lean Thinking: Banish Waste and Create Wealth in Your Corporation](#)
- [Learning to See: Value Stream Mapping to Create Value and Eliminate MUDA](#)

## STEP 3: Evaluate Your Lean Knowledge

These resources can help you assess and evaluate your lean knowledge before you take the exam:

- [Classroom Review Program](#): This collaborative, instructor-led review program helps solidify your understanding of the Body of Knowledge. It is an invaluable opportunity to prepare you for the exam and provide you with a foundation for completing the Lean Certification program.
- [Online Review Program](#): This online review program contains eight courses with key lean principles, concepts, and tools covered in the [Lean Certification Body of Knowledge](#) to prepare you for the Lean Bronze Certification exam.

## STEP 4: Apply for Lean Bronze Certification

The Lean Bronze Certification exam is offered in online and paper/pencil formats. You have one year to take the exam from the date you apply. > [Click here to apply](#)

## STEP 5: Schedule and Take the Exam

The Lean Bronze Certification exam is a three hour, open book, and open notes exam. It consists of approximately 165 multiple-choice questions mapped to the [Body of Knowledge](#). Exam questions are taken from the [Core Reference Material](#).

You must submit your [Proctor Form and Agreement](#) to SME **at least two weeks before your scheduled exam date**. You can find [exam preparation tips](#) and other resources at [sme.org/prepare](#).

To pass the exam, you need to score 75% or higher. After your exam is scored, you will receive official results by mail, which includes an [Examination Analysis Report](#) that provides a breakdown of your results by knowledge area.

Upon passing the exam you will earn your Lean Knowledge Certificate (not a certification) that serves as a base in your pursuit of Lean Bronze Certification. Your Lean Knowledge Certificate is valid for three years and is not renewable.

## STEP 6: Submit Your Lean Bronze Portfolio

To earn your Lean Bronze Certification, you must demonstrate your ability to apply lean principles and tools. This is accomplished through the development of your Lean Bronze Portfolio. You have three years from receiving your Lean Knowledge Certificate to submit your Portfolio, which must document and include:

- 80 hours of [education and training requirements](#)
- Three tactical projects where specific lean principles and tools were applied (events, projects, activities)
- A reflection statement that captures your lean journey and what you have learned through the certification process.

Visit [sme.org/prepare](#) for the [Portfolio Requirements and Forms](#) and additional resources.



## STEP 7: Plan Your Next Step

Upon passing your Portfolio review you will earn your Lean Bronze Certification (LBC). During this time you may choose to pursue recertification or another certification rank. Your Lean Bronze Certification is valid for three years.

If you have questions or need additional information [email us](#), complete the [online inquiry form](#), or call SME Customer Care at 800.733.4763 or 313.425.3000.

## Why a Portfolio?

Knowing about lean is just a part of the lean journey. Lean is about how to apply that knowledge everyday toward the continuous improvement of your organization and yourself. It's about how you help others along in their lean journey. It's about more than tools — **it's about creating a system and culture that can sustain continuous improvement through employee and customer involvement.**

Industry practitioners agreed that an exam only Lean Certification Program was not sufficient. The evaluation of an individual based on the natural progression of the application and demonstration of lean in practice is essential. Actual experience is critical to this certification. In addition, industry wanted to develop a Portfolio that could grow with a certification candidate as they progress in their careers – a way to document both results and personal growth and development.

The Portfolio is a selection of projects that candidates undertook. It demonstrates the ability to sustain the project, look for future improvement opportunities, and show the ability for continuous learning. It illustrates how the candidate plans to progress on their own lean journey.

## The Bronze Portfolio is About You

Using the Plan-Do-Check-Act (Adjust) cycle, the Portfolio requires you to:

- Document your lean-related education, training, and development activities.
- Describe a selection of projects you have been or are involved with appropriate to the Bronze Certification that you are pursuing.
- Reflect on your Portfolio and experience and build your development plan for your recertification cycle.
- Your Portfolio should be filled with “I” language (e.g., I did, I facilitated, I led, etc.)
- DO NOT include pictures, graphs, or any other type of images in your document.
- You may keep company names confidential on your projects/accomplishments, however you MUST, at a minimum, indicate the industry you worked in and the part of the organization that was affected by the project/transformation.
- Your Portfolio reviewer may reach out to you for clarification. It is your responsibility to take their feedback and incorporate it into your Portfolio.
- If your Portfolio FAILS on the first submission, you will have ONE opportunity to revise and resubmit.
- If your Portfolio fails on the second attempt, it automatically goes to the [Committee of Oversight and Appeals \(COA\)](#) for appeal. If the COA upholds the fail, you have to wait one year to resubmit.
- Your Portfolio MUST be submitted in the fillable PDF document provided at [sme.org/prepare](#). All other formats will be rejected.
- Please use the following naming convention for your file name:  
**Customer ID\_LastNameFirstName\_Certification Rank.pdf** (Example: 123456\_DoeJane\_Bronze.pdf)

Please visit [sme.org/leanrecert](#) for see recertification requirements.

Refer to the Lean Certification [Body of Knowledge](#) for a topical outline of examination subjects.



## Exam Requirements

The first step to completing your certification is the knowledge [exam](#). The Lean Bronze exam has approximately 165 multiple choice questions, is three hours in length, and is open book/open notes. View [exam preparation tips](#) and other resources at [sme.org/prepare](http://sme.org/prepare).

- Apply for your certification exam:
  - Online at [sme.org/bronze-exam](http://sme.org/bronze-exam).
  - By calling SME Customer Care at 800.733.4763.
- Set up your exam date by contacting [certification@sme.org](mailto:certification@sme.org).
- Take the exam. Note: If you do not pass the exam, you must wait 30 days before attempting again.
- After passing the exam, complete and upload your Portfolio by logging into your SME Customer Account at [sme.org](http://sme.org).
- Please use the following naming convention for your file name:  
**Customer ID\_LastNameFirstName\_Certification Rank.pdf** (Example: 123456\_DoeJane\_Bronze.pdf)

### NOTE:

Only hard/soft cover books are allowed in the exam — no electronic books, cellphones, or tablets are allowed.



### Portfolio Submission Instructions

To upload your Lean Portfolio/Accomplishment Record, log into your SME Customer Account at [sme.org](http://sme.org) and click “Register or Sign In” in the upper right hand corner of the webpage. If you need assistance, call SME Customer Care at 800.733.4763 or 313.425.3000. [Click here](#) to view these instructions with graphics.

1. After signing in, click **View Your Profile** (located in upper right hand corner of webpage).
2. Under Certification, click **Portfolio Submission** (from menu on left side).
3. Under My Account, click **New Submissions** (from menu on left side).
4. Click **Start** next Lean Certification Bronze Portfolio.
5. Are you an **Author** on this submission? This will automatically be prepopulated to “Yes.”
6. Enter the **Title** of your submission.
7. Select **Lean Portfolio** for the Category.
8. Skip **Length in Minutes** and **Audience Level of Expertise** as these are not applicable for the Portfolio.
9. **Topic Options** will automatically list Bronze Portfolio. Select Bronze then click the arrow to move the topic over.
10. **Primary Topic** will automatically populate after moving your topic option over.
11. Select the Tactical (Bronze) **Keyword** for your Portfolio and click the arrow to move over.
12. Click **Save and Continue**.
13. **Verify/update** your personal information.
14. Select Continue from the drop down and then click **Go**.
15. In the Word text box, add a course outline or a note about your Portfolio (e.g., This is my Lean Bronze Portfolio). **This is a required field and must contain text to proceed.**
16. If you have another outline to upload click **Add Another**.
17. Click **Choose File** and select your Portfolio. Please make sure the naming convention below is used for your file. **Customer ID\_LastNameFirstName\_Certification Rank.pdf** (Example: 123456\_DoeJane\_Bronze.pdf)
18. Click **Upload**.
19. Type **Yes** in the text box to agree to the Terms and Conditions.
20. The **Usage Questions** are not applicable for the Portfolio. Please make sure all questions are answered **No**.
21. Click **Save and Continue**.
22. Verify your Submission Information. If everything is accurate, click **Submit**.

Your Portfolio MUST be submitted in the fillable PDF document available on the Bronze tab at [sme.org/prepare](http://sme.org/prepare). All other formats will be rejected. An email acknowledgement will be sent when your Portfolio is received. If you do not receive an acknowledgement within 48 hours, please assume your Portfolio was not received. Report any upload difficulties to [certification@sme.org](mailto:certification@sme.org) or call SME Customer Care at 800.733.4763 or 313.425.3000, Monday-Friday, 8:00 a.m.-5:00 p.m. eastern time. Review of your Portfolio may take up to 60 days to complete.

Upon passing your Portfolio, you will receive your Lean Bronze Certification.



### Education, Training, and Development

**Bronze Candidates:** 80 Hours Minimum

Projects and accomplishments should demonstrate continuing practice in lean. For example, if you are applying for certification in 2015, and you started your lean practice in 2010, you may choose to include projects or accomplishments from 2011, 2013, and 2015 in your Portfolio to demonstrate that you are still practicing lean.

As a part of your Portfolio, there is a requirement to capture your lean continuing education, training, and development activities in which you have participated. Your lean education, training, and development documentation **MUST** demonstrate continuing investment in your lean education over time.

Your education, training, and development **MUST** include three (3) or more of these various categories of professional development activities:

- Classroom Training
- Hands-on Programs
- Web-based Seminars
- Conference Programs

**NOTE:**

Indicate the **number of hours** spent in session (instructor or attendee). Document training you have delivered or attended by attaching a syllabus or curriculum outline. If any single activity is more than 20 hours of credit, please provide an outline of the course or activity explaining its content.

- Videos – indicate the length of the video
- Books – Valued at four (4) hours of education, training and development per title read
- Plant tours – one (1) hour credit for each hour of tour and tour presentation

As part of your documentation, you must indicate the parts of the Lean Certification [Body of Knowledge](#) addressed in your continuous training.

**NOTE:**

**If you are including kaizen events or other hands-on events as training, they may not be used for your Portfolio projects. You may only count each activity or event one time.**

### Portfolio Requirements: Bronze

DOCUMENTATION REQUIREMENTS BRONZE CERTIFICATION LEVEL:		
Certification Rank	Roles in Projects	Portfolio Requirements
Bronze (Tactical)	Participant, Leader, Co-Leader, Facilitator, Co-Facilitator	80 hours of education, training, and development
		3 Tactical (Local) Projects
		1 Portfolio Reflection on the entire Lean Bronze Certification process (1 page) <b>ALL Projects MAY be part of a single Value Stream</b>



## Sample: Education, Training, and Development Form

This is a sample of a completed Education, Training, and Development Form for Bronze Certification. It provides a sample of the types of activities you may want to document and how to indicate the areas covered from the Lean Certification [Body of Knowledge](#). Please refer to the Lean Certification Body of Knowledge for the topics covered under each module.

Place an "X" in the cells below to indicate the following Lean Certification Body of Knowledge areas covered by your education, training, and development activities. (See the Lean Certification Body of Knowledge for topic details.)

Education, Training, and Development Activities (Descriptions)	Year	Hours	Cultural Enablers	Continuous Process Improvement	Consistent Lean Enterprise Culture	Business Results
<b>If submitting a single activity for more than 20 hours of credit, provide an outline of the course/activity, explaining its content.</b>						
Hands-On Kaizen training: Part of a 10 person team to receive internal training on Kaizen planning and participation	2007	15	X	X		X
LM NO Training: Lean strategic planning & implementation training	2008	24	X	X	X	X
Lean Production Simplified – Book	2009	4	X	x	X	
ABC Annual Conference: attended sessions on the human side of lean, lean culture, lean for the office, lean metrics	2011	12	X			
Toast Kaizen – Video	2011	0.5	X			X
Hitchhiker’s Guide To Lean – Book	2012	4	X	X	X	X
QRS Web Seminar: Effective Lean Leadership	2012	1	X			X
XYZ Company Internal Training: Factory Floor Kaizen Blitz Facilitation	2013	24		X		X
<b>TOTAL EDUCATION, TRAINING, AND DEVELOPMENT HOURS:</b>		84.5				

## Portfolio Reflection

Continuous improvement and human development are at the heart of the lean journey. The Portfolio Reflection is intended to capture your personal lean development journey and your reflection about what you have learned through the Portfolio and certification process. Your Portfolio Reflection assesses:

- Your lessons learned through completing this Portfolio process.
- Your greatest challenge in your lean journey and how you addressed it.
- Changes you could make in your lean implementation process that could make you more effective.
- Your three to five year developmental plan.
- Greatest challenges to achieving your developmental plan and how you intend to overcome them.

You have one (1) page maximum to complete your Portfolio Reflection.



## Peer Review

All Portfolios are peer reviewed by Lean Certified practitioners. A reviewer may be a representative of the Lean Certification [Oversight and Appeals Committee](#). Portfolios will be evaluated and scored against the criteria outlined under the Portfolio Requirements. A reviewer will evaluate each Portfolio to determine if they are able to score it. If the reviewer determines that they are unable to score the Portfolio, it will be returned to the candidate with comments/feedback. The reviewer may contact the candidate directly.

Bronze Candidate Portfolios will be evaluated by a single reviewer. If a Portfolio does not pass on first submission, it will be returned to the candidate with a completed score sheet and comments. A candidate has ONE opportunity to address Portfolio deficiencies and resubmit the Portfolio for a second review. The revised Portfolio will be sent to the original reviewer. As a system of checks and balances, if a Portfolio does not pass on the second review, it will be sent to one additional reviewer to review. If a second reviewer is required, a conference call between the two reviewers will be scheduled to reach consensus on the Portfolio score before results are returned to the candidate.

Expect that the documentation review may take up to 60 days to complete.

## Bronze Portfolio Scoring

Each element of the Portfolio is scored individually. To pass the Bronze Portfolio you must receive a:

- “Pass” on the education, training, and development requirements
- Score of 12 out of 15 possible points on EACH project (all three projects must pass)
- Score of 20 out of 25 points for your Portfolio Reflection

If an element of your Portfolio does not pass, your Portfolio will be returned to you and you have one opportunity to update the element that did not meet the requirements. Upon resubmission, only that element will be reviewed. Elements that have already passed will not be reevaluated.

If you have questions regarding the feedback provided to you by your reviewer, please contact SME. We will contact the reviewer and they will either provide you with feedback through SME or contact you directly to coach you through your concerns.

### BRONZE SCORING MATRIX

Portfolio Component	Scoring	Pass Point
Education, Training and Development	Pass/Fail	Pass
Tactical Projects (3)	15 points per project	12 points per project
Tactical Portfolio Reflection	25 points	20 points



## Lean Certification Glossary

Term	Definition (as applies to the Lean Certification program)
<b>Bronze (Tactical)</b>	Tactical lean is the deployment and application of lean principles, concepts and methods locally, within a work cell, work group, or value stream. This may be a workshop or project focused on implementation of specific lean concepts or techniques.
<b>Coaching</b>	Coaching is a two-way relationship over an extended period of time in which more experienced individuals assist teams or workgroups through a development process that provides as-needed support and guidance. The primary objective of coaching is to enhance team knowledge and abilities so that the team is better able to perform a function, in this case, to deliver results using lean principles, tools, and techniques. An additional objective of coaching is to refine the coach's knowledge and abilities through the process of teaching.
<b>Enterprise</b>	A business or organization systematically working toward a common goal. This may be an entire company, a plant, a business unit, a satellite office, and may include external suppliers and customers.
<b>Event</b>	A structured, focused, multi-day activity (3-5 days) that targets a process for waste elimination and improvement. Events can include kaizen blitz, value stream mapping, radical change event, 5S, etc.
<b>Facilitator</b>	A facilitator is someone who skillfully orchestrates successful group efforts. They help people understand their common objectives and work with them to create and implement plans to achieve them. Much like a conductor, a facilitator must guide and direct efforts towards a successful lean transformation of a project, process, value stream, or the entire enterprise.
<b>Gold (Strategic)</b>	This is a lean transformation of a business or organization. This requires at least two business transformation projects that include two or more of the classic value streams of: <ol style="list-style-type: none"> <li>1. New product development</li> <li>2. Order through delivery</li> <li>3. Supply chain</li> <li>4. Administrative functions</li> </ol>
<b>Leader</b>	A leader is a person who can influence and guide others through lean projects, value streams, and/or transformations. They have an ability to accomplish objectives and direct lean efforts that align with organizational goals.
<b>Mentoring</b>	Mentoring is a relationship between two individuals over an extended period of time in which the more experienced individual assists the other person through a development process that provides as-needed support and guidance. The primary objective of mentoring is to enhance an individual's knowledge and abilities so that they are better able to perform a function, in this case, to deliver results using lean principles, tools and techniques. An additional objective of mentoring is to refine the mentor's knowledge and abilities through the process of teaching. The mentor also fulfills an important social role necessary in all professions — sharing acquired knowledge for the betterment of the professional society, as a whole.
<b>Participant</b>	A participant is an individual who shares in the responsibility of a lean project. They have an active role in the project, and are responsible for elements of the implementation as well as measurable outcomes.
<b>Project</b>	A project is a focused effort to support a lean transformation of a process or resource. A project may be a subcomponent of a larger value stream lean transformation, with clear, defined parameters. A project must have defined objectives and measurable outcomes.
<b>Reflection</b>	The reflection is intended to capture your personal lean developmental journey, and your reflection about what you have learned through the Portfolio and certification process.
<b>Silver (Integrative)</b>	This is the integration of lean activities, coupled with organizational restructuring, necessary for transformation and sustainable lean operation of a complete value stream.
<b>value Stream</b>	Value stream is defined as the "integration of processes which create, produce, and deliver a good or service to the customer or market."