



Lean Six Sigma Red Belt in Safety (LSSRBS)[™]

Syllabus

Introduction

As organizations change, so does their need to focus on shifting safety concerns. Safety programs utilize rules, training, signage, and behavior modification to manage worker actions. Applying Lean Six Sigma into safety has tremendous potential. Lean Six Sigma provides a framework for integrating safety into operations. It may seem that processes like Lean Six Sigma and Safety are two completely different worlds, but in reality, Lean Six Sigma concepts can be used to increase safety.

The goal of the Management and Strategy Institute is to teach you the key competencies required to function in the role of a Lean Six Sigma Red Belt in Safety. As you go through the training material you will learn the competencies listed below.

The LSSRBS exam is a timed, online exam. It has a required passing score of 70%. The number of questions is randomized between 35 & 50.

Competencies

This course of study covers the following competencies:

History of Six Sigma

- Why is Six Sigma used in business, and where did it come from.
 - Learning Outcome: The student will be able to define Six Sigma. They will understand what Six Sigma is, and is not.

Lean

- General understand of Lean
 - Learning Outcome: The student will be able to define Lean.

The Importance of Safety

- An unsafe work environment cannot be ignored.
 - Learning Outcome: The student will learn the importance of safety, general legal responsibilities, discuss OSHA, and define risk and benefits.



Six Sigma Red Belt in Safety

- What is a Six Sigma Red Belt in Safety?
 - Learning Outcome: The student will learn the difference between a Red Belt in Safety and a Safety Manager. Roles of the Red Belt in Safety.

Risk Areas of Focus

- What are the risks that businesses face, and how can Lean Six Sigma help? This program is going to focus on five specific risks. We've chosen to focus on these five because they represent broad risks that can affect any industry. Undoubtedly, there are hundreds of other risks that you, your co-workers, or your company may face each day. As a certified Red Belt, you'll need to have a thorough understanding of your industry and the unique needs of your organization.
 - Learning Outcome: The student will learn five area's of risk. Fire, sound, chemical/electric, transport, machinery. Discuss the risk, the assessment of that risk, prevention techniques, and the communication requirements of the risk.

Fire Risk

- Implementing fire safety requires an understanding of the different causes and types of fires as well as effective assessments and prevention methods.
 - Learning Outcome: The student will learn fire prevention basics: Fire risk, common causes (Equipment, Chemicals and gases, Electrical, Flammable products, Lightning, Arson, Fireworks, Smoking, Candles), classes of fires, assessments, prevention, Gemba, Gemba Walk, Genbutsu, Communication, 1 case study.

Sound

- Sound is an easily overlooked but serious hazard that must be addressed.
 - Learning Outcome: The student will learn levels of noise, assessment techniques (Octave band analyzers), OSHA recommendations, risk assessment example form, PPE, HPPE, environmental changes, work environment & 5S, 5S defined, 1 case study.

Chemical and Electrical Hazards

- Chemical and electrical hazards occur even in seemingly safe environments.
 - Learning Outcome: The student will learn chemicals come in liquid, gas, and powder forms, OSHA list, different chemicals risks, Material Safety Data Sheets, four different ways to control exposure, electrical dangers, policies and controls.

Failure Mode and Effects Analysis (FMEA)

- A systematized technique that identifies and ranks the potential failure modes.
 - Learning Outcome: The student will learn how FMEA acts as a way of identifying and preventing problems before they occur. Risk priority number (RPN), Process FMEA, 'RPN = severity X occurrence X detection'

Process safety management (PSM)

- To help ensure safe and healthful workplaces, OSHA has issued the Process Safety Management of Highly Hazardous Chemicals standard (29 CFR 1910.119)
 - Learning Outcome: The student will review the Process Safety Management of Highly Hazardous Chemicals standard (29 CFR 1910.119)

Transportation

- Transportation occurs on both the roadways and company property.
 - Learning Outcome: The student will assess transportation hazards, risk assessment, on-site, off-site, policies to prevent injury, Plan-Do-Check-Act (PDCA), Five Why (5 Why).

Machinery

- While machines have the potential to improve productivity and make some tasks easier, they can also increase risks to employee safety.
 - Learning Outcome: The student will learn to identify machines and their risks, establish safeguards, limit use, care and maintenance, Womack's Principle, Kaizen.

Safety Program

- Safety programs require performing a risk assessment, establishing goals and objectives, developing policies and procedures, and training employees to adhere to the program guidelines.
 - Learning Outcome: The student will learn about risk assessments, descriptive vs numeric goals, Objectives, policies and procedures, safety policies, training.

Monitoring

- Every safety program requires careful monitoring.
 - Learning Outcome: The student will learn about key performance indicators, audits and inspections, reports of incidents, assess data.



Learning Resources

Recommended:

Material included with your purchase is recommended reading.

- Free online training material provided by MSI. The material includes everything you will need to learn to pass the exam. This material is included for free with the purchase of your exam. It is in digital form, and available immediately after payment.

Optional:

This material is not required, however it will assist you in becoming certified.

- Paul F. English (November 21, 2011), *Safety Performance in a Lean Environment: A Guide to Building Safety into a Process*, ISBN-13: 978-1439821121

Preparing for Success

In order to successfully complete the LSSRBS exam, you will need to make sure you have the appropriate resources to support your learning.

- A quiet location, free from distraction.
- Internet access.
- Current (newest) version of Internet Explorer, Firefox, or Chrome browser.
- Take study notes while going through the training.
- When you are ready to take the exam, you should allot 2-hours of time.

Frequently Asked Questions

What happens if I fail the exam?

- You are given two additional attempts to pass the exam at no additional cost.

Will I receive Professional Competency Units (PCU's)?

- Yes, the LSSRBS exam awards 20 PCU's upon passing of the exam.