



Lean/ Six Sigma: Green Belt Certification Course

Paths, Milestones and Steps

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Alternatives to become a Certified Green Belt

Wikipedia: „Criteria for Green Belt and Black Belt certification vary; some companies simply require participation in a course and a Six Sigma project. There is no standard certification body, and different certification services are offered by various quality associations and other providers against a fee.”

	work experience required	examination of knowledge level	implementation of a certification project	fee	benefit
ASQ¹⁾	3 years, full time, paid role; in one or more areas of the ... Green Belt Body of Knowledge ²⁾	yes	no	yes	participant
TUM	no	yes ³⁾	yes	yes	participant & company

1) American Society for Quality
 2) Source: ASQ - Certified Six Sigma Green Belt

3) TUM Yellow Belt Certificate

**We go without your previous professional experience,
 but we require the implementation of a Six Sigma project.**

There is no standard certification body – we follow the TUM standard with theory and practice



What do you want?

Optional paths through this Green Belt course			
Your Objective ... and tasks ...	I just want to inform myself	I would like to learn more about theory and practice	I would like to acquire the TUM Lean Six Sigma Green-Belt Certificate
must see and use	Videos, Handouts, sigmaGuide	Videos, Handouts, sigmaGuide	Videos, Handouts, sigmaGuide, Project-Story-Book-Templates
must identify		suitable real project topic	suitable real project topic in your company with at least: - 1 Quality Problem - 1 Availability Problem (reduce cycle time or increase volume) - 1 Consumption Problem (increased utilization of Inputs or Resources or eliminate waste in the process)
must implement		selected project	selected project
must assure		support of a Sponsor for the project, interviews with (internal) customers, two workshops with subject matter experts	
must verify		successful implementation of the project; document project results and benefits in your Project-Story-Book	
must participate		project coaching's (individual and group sessions)	
must pay		975 €	
must have/ acquire		TUM Lean Six Sigma Yellow Belt Certificate	
must go		<u>Milestones to Certification to go within one year</u>	

Inform yourself or work for your Green Belt Certificate?



Our way to your Green-Belt Certification ...

	Introduction	DEFINE (part 1 & 2)	DEFINE (part 3)	MEASURE	ANALYSE	IMPROVE	CONTROL
Course Content	Videos	Videos, Handouts, sigmaGuide, Project-Story-Book	Videos, Handouts, sigmaGuide, Project-Story-Book	Videos, Handouts, sigmaGuide, Project-Story-Book	Videos, Handouts, sigmaGuide, Project-Story-Book	Videos, Handouts, sigmaGuide, Project-Story-Book	Videos, Handouts, sigmaGuide, Project-Story-Book
	01 Certification Path	07 sigmaGuide (Software Guide for Six Sigma Projects)	10 DEFINE SIPOC & CTQs & Project-Charter	11 MEASURE Input-Analysis & Process-Analysis	14 ANALYSE graphical-Inspection & Process Capability	17 IMPROVE	18 CONTROL
	02 Course Introduction	08 Project-Story-Book (Documentation of Project)		12 MEASURE C&E-Matrix & Data-Collection-Plan	15 ANALYSE Hypothesis-Tests		19 DMAIC Summary
	03 Six Sigma Introduction 1/3	09 DEFINE Project-Topic and Project-Definition		13 MEASURE Hypothesis-Generation	16 ANALYSE Root-Cause-Analysis		20 Certification & Course End
	04 Project-Example Cookie Du Chef						
	05 Six Sigma Introduction 2/3						
	06 Six Sigma Introduction 3/3						
Your Deliverables and Approach		- sigmaGuide: tool application - results edited in Project-Story-Book (D) - confirmation eMail of your sponsor - registration for the course at TUM EEC - payment of the course fee to TUM EEC	- sigmaGuide: tool application - interview with (internal) customers - results edited in Project-Story-Book (D)	- sigmaGuide: tool application - 1st workshop: Process-Mapping/-Analysis - Minitab: Worksheet with collected data - results edited in Project-Story-Book (DM)	- Minitab: Inspections and Analyses - 2nd workshop: Root-Cause Analysis - results edited in Project-Story-Book (DMA)	- sigmaGuide: tool application (2nd workshop) - results edited in Project-Story-Book (DMAI)	- sigmaGuide: tool application - Minitab: Process-Capability & Control-Charts - results edited in Project-Story-Book (DMAIC)
We Check	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.)	- confirmation eMail of your sponsor - registration for the course - sigmaGuide: Project-Topic Project-Definition - Project-Story-Book (D)	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.) - sigmaGuide - Project-Story-Book (D)	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.) - sigmaGuide - Process-Mapping & -Analysis - pictures from 1st workshop - Project-Story-Book (DM)	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.) - Minitab: results - Root Cause Analysis - pictures from 2nd workshop - Project-Story-Book (DMA)	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.) - sigmaGuide - Project-Story-Book (DMAI)	- exam questions (Answering the questions is voluntary. Results have no relevance for certification.) - sigmaGuide - Minitab: results - verification of financial and other benefits - Project-Story-Book (DMAIC)
Our Coaching		- written feedback on the: suitability of the Project-Topic and quality of the Project-Definition on our learning platform Moodle	- written feedback - one-to-one online session on demand on our learning platform Moodle	- written feedback - one-to-one online session on demand on our learning platform Moodle	- written feedback - one-to-one online session on demand on our learning platform Moodle	- written feedback - one-to-one online session on demand on our learning platform Moodle	- written feedback - one-to-one online session on demand on our learning platform Moodle
			- group online session for all participants on our learning platform Moodle	- group online session for all participants on our learning platform Moodle	- group online session for all participants on our learning platform Moodle	- group online session for all participants on our learning platform Moodle	- group online session for all participants on our learning platform Moodle
Decision about phase success		Master Black Belt (TUM) Manager of your company as Sponsor of your project	Master Black Belt (TUM) Manager of your company as Sponsor of your project	Master Black Belt (TUM) Manager of your company as Sponsor of your project	Master Black Belt (TUM) Manager of your company as Sponsor of your project	Master Black Belt (TUM) Manager of your company as Sponsor of your project	Master Black Belt (TUM) Manager of your company as Sponsor of your project
Timeline							
Start of Phase	29 June 2018	06 July 2018	03 August 2018	31 August 2018	28 September 2018	26 October 2018	23 November 2018
Deadline for Deliverables	06 July 2018	03 August 2018	31 August 2018	28 September 2018	26 October 2018	23 November 2018	28 June 2019
Duration of Phase (days)	7	28	28	28	28	28	217
Steps:	link to steps	link to steps	link to steps	link to steps	link to steps	link to steps	link to steps

... involves you as a candidate, your Manager as a Sponsor and our Master Black Belt as your Coach

You must go several steps to each milestone

		DEFINE (part 1 & 2)		DEFINE (part 3)		MEASURE		ANALYSE		IMPROVE		CONTROL	
Course Content												Videos, Handouts, sigmaGuide, Project-Story-Book	
Your Deliverables and Approach												Please watch all videos, read handouts, apply sigmaGuide, fill Project-Story-Book template The use of Minitab is explained in the handouts: Six-Sigma-Statistics I & II	
												Monitor the implementation of the action-items from the IMPROVE phase according to the action-list	
We Check												Collect new data after the implementation of action-items	
												Minitab: minimum requirements for inspections and analyses are: - plausibility check of collected data (min, max, appropriate scale-level of variables) - graphical evaluation of collected data (Pareto-Diagram, Time-Series-Plot, Scatter-Plot) - calculation of performance level (sigma-level, DPMO, ...) - appropriate control-charts (IMR, x-bar/ s, ...) - test of hypothesis (before-after comparison, e.g. with t-test)	
Our Coaching												sigmaGuide: application of tools and approach - Process-Management-Plan -> Arrangements with the persons responsible for process monitoring and corrective actions - Project-Benefits -> Calculate financial benefits of the improvements and identify other, non-financial benefits	
												Project-Story-Book (DMAIC): please summarize the important findings of these phase in a comprehensible presentation for your Sponsor. A PowerPoint template for the presentation is available as download in the edx course chapter.	
Decision about phase success												The correct answering of the exam questions in this part is not necessary for the certification. But the correct answers are helpful for working on the project.	
												Project-Story-Book (DMAIC): please summarize the important findings of these phase in a comprehensible presentation for your Sponsor. A PowerPoint template for the presentation is available as download in the edx course chapter.	
Timeline												Existence of your: TUM Lean and Six Sigma Yellow Belt certificate	
back to Milestones												For our coaching with written feedback , please upload your edited versions of sigmaGuide and you Project-Story-Book to your Moodle workspace.	
												You will receive written feedback in your sigmaGuide and Project-Story-Book via Moodle within a few days.	

Please adhere to this standard exactly



TUM School of Management

Technische Universität München



Certificate

We hereby confirm that

Xxx Yyyy

has successfully completed the certification requirements for the

TUM Lean Six Sigma Green Belt

through the successful completion of the Professional Series of courses on the edX platform and the successful implementation of a real Six Sigma project in a company

Six Sigma and Lean: Quantitative Tools for Quality and Productivity