

# SCRUM Syllabus

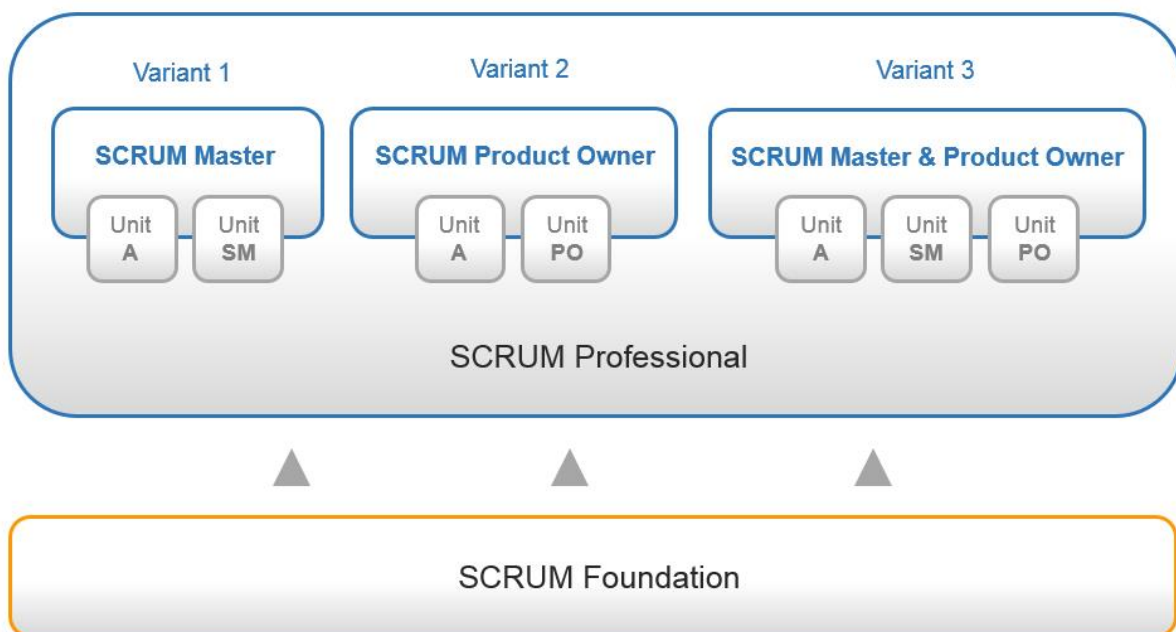
Version: 3.0

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Note: This is the English translation of “SCRUM Lehrplan”, Version 3.0

In case of doubt, the German version always applies in its most recent version.



The time constraints are a requirement for how long a presence training must take. The duration of the classroom training can be reduced to 60% of the time if appropriate learning forms (e.g. e-learning) ensure that the content to be conveyed in the curriculum is adequately brought closer to the training participant.



# SCRUM Foundation

Time limit 18 x 45 min = 810 min (13h 30 min)

Subject	%	Details
Introduction to agile methods	10%	<p>Incentive for agile methods &amp; comparison with traditional methods</p> <p>Classic Project Management: Waterfall model</p> <p>The Agile Manifesto - The 4 central values of the agile manifesto</p> <p>Features of agile methods - people-centred, empirical, iterative, flexible, customer-oriented</p>
SCRUM – an agile management framework	10%	<p>Overview</p> <p>Roles: SCRUM team, development team, SCRUM Master, Product Owner</p> <p>Events (Rituals): Sprint, Sprint Planning, Daily SCRUM, Sprint Review, Sprint Retrospective</p> <p>Artefacts: Product Backlog, Sprint Backlog, Product increment</p> <p>Values: Courage, Focus, Commitment, Respect, Openness</p> <p>Features and central aspects of SCRUM: Early recognition of problems, customer satisfaction, authorization of employees</p>
SCRUM roles	10%	<p><b>Product Owner:</b> Functions and attributes, representative of customer needs, collaboration with the team, requirements engineering, acceptance of results, release management, responsible for the project's success</p> <p><b>Development team:</b> Functions and attributes, implementation of requirements, decision-making authority, self-organisation, authorizations, differences from traditional methods, interdisciplinary, team size, team phase model (Tuckman)</p> <p><b>SCRUM Master:</b> Functions and attributes, establishment of SCRUM processes, impediments, moderation, coaching</p>
Requirements Engineering in SCRUM	15%	<p>Product Backlog: Features, requirements engineering, prioritization, level of details, estimation (story points, planning poker), backlog refinement and grooming</p> <p>Product concept – from the idea to a product backlog</p> <p>Requirements description in SCRUM: Differences to classical RE, incremental innovation</p> <p>User stories: Features and use cases, acceptance criteria, splitting stories, INVEST properties</p> <p>Prioritisation: Criteria of the prioritisation, value-risk matrix (Cohn), MuSCoW prioritisation</p>
Sprints	20%	<p>Properties: Iteration, duration, relationship between several sprints, product increment, relationships with sprints</p>



		<p>Sprint planning: Aim, features, commitment driven planning, distribution of tasks, acceptance criteria, estimations, team capacity</p> <p>Daily SCRUM: Aim, features, timeboxing, techniques, questions to be answered</p> <p>Sprint review: Aim, features, customer feedback, acceptance of results, definition of done</p> <p>Sprint retrospective: Aim, features, performance of the team, regulations, measures, analysis of causes</p> <p>SCRUM taskboards (Sprint backlog): Aim, content, structure, actualisation</p> <p>Impediments backlog (chart): Aim, features, treatment of impediments</p> <p>Tracking sprint progress: Reports, sprint burndown, end-of-sprint report</p>
Tracking the project progress	10%	<p>Reports: Release burndown, velocity, factors of velocity</p> <p>Possible metrics</p>
Release-management	10%	<p>Relationships between the planning levels - task, story, sprint, release</p> <p>Release planning - assess effort, estimation of velocity, setting the order of implementation</p>
Large and distributed projects	10%	<p>Basics, challenges, prerequisites, integration and introduction of several teams, communication, growth, Examples of frameworks for scaling SCRUM</p> <p>Product Owner team, Chief Product Owner, Product Owner Team as SCRUM team</p> <p>Feature and component teams, allocation of work organisation</p> <p>Multi-team coordination: SCRUM of SCRUMs</p>
Further topics	5%	<p>Contractual aspects, fixed price projects</p> <p>Tool support: Examples and integration of tools</p>



## SCRUM Professional – General

Time limit 9 x 45 min = 405 min (6h 45 min)

Subject	%	Details
Agility & SCRUM deepening	10%	Central aspects of SCRUM Empirical process management Backgrounds: Agile values and agile manifesto, agile principles
DevOps	20%	Definition and aims of DevOps Linking agile development and parallel operation DevOps practical: <ul style="list-style-type: none"> <li>- Implementation of DevOps</li> <li>- Coordination of teams, tools and infrastructure (tool chains)</li> </ul> Continuous deployment, continuous integration & continuous delivery
Kanban	20%	Definition and aims of Kanban Background (control of production processes, value and supply chain) Kanban rules (6 basic principles of Kanban) Kanban cards (necessary information and data) Kanban boards (visualization, monitoring, transparency)
Agile testing	20%	Basic principles (Fast feedback, high automation, low overheads) Role of the tester in an agile project, collaboration with development Testing in sprints vs. dedicated test teams Definition of READY, Definition of DONE, Definition of TEST
Introducing SCRUM into organisations	15%	Need & Motivation for the introduction and implementation of SCRUM Representing SCRUM in organisations and companies Introductory phases (pilot- and establishment phase) Practices for introducing SCRUM Problems with the introduction of SCRUM
Scaling SCRUM	15%	Frameworks for scaling SCRUM (Presentation of frameworks, specific properties, classification, pros and cons) <ul style="list-style-type: none"> <li>- Large Scale Scrum (LeSS)</li> <li>- Nexus</li> <li>- Scaled Agile Framework (SAFe)</li> </ul>



## SCRUM Professional – SCRUM Master

Time limit 9 x 45 min = 405 min (6h 45 min)

Subject	%	Details
The ideal SCRUM Master	10%	Characteristics of an ideal SCRUM Masters „Servant Leadership“ as a leadership style
Responsibilities of the SCRUM Master	30%	Interaction between SCRUM Master and SCRUM <ul style="list-style-type: none"> <li>- SCRUM Master and Product Owner</li> <li>- SCRUM Master and development team</li> <li>- SCRUM Master and organisation</li> <li>- SCRUM Master and SCRUM rituals</li> <li>- SCRUM Master and SCRUM artefacts</li> </ul>
Coaching and support	20%	Coaching, support in the development of people Conflict resolution Feedback techniques Mediation
Continual improvement	20%	Retrospectives <ul style="list-style-type: none"> <li>- 5 phases of a retrospective</li> <li>- 4L (Liked, Learned, Lacked, Longed)</li> <li>- Tools for retrospectives</li> </ul> Dealing with impediments (Impediments Backlog)
Techniques for daily work	10%	Moderation techniques Meeting rules Planning and managing communication
Assessing agility	10%	Agility Index Measurement Self-Assessments: Nokia test, 42 points list, Karlskrona test



# SCRUM Professional – Product Owner

Time limit 9 x 45 min = 405 min (6h 45 min)

Subject	%	Details
Role of the Product Owner	5%	Responsibilities and tasks of the Product Owners Interfaces to development and stakeholders (customers)
Requirements engineering - identify requirements	20%	General: requirements, functional / non- functional requirements Stakeholder, duties of the stakeholder, stakeholder analysis (stakeholder matrix) Overview of types of discovery techniques <ul style="list-style-type: none"> <li>- Survey and interview techniques</li> <li>- Creativity techniques</li> <li>- Document based techniques</li> <li>- Supporting techniques</li> </ul> Design Thinking
Requirements engineering - document requirements	40%	Product Backlog, PBIs, minimum and further attributes of PBIs Documentation of requirements <ul style="list-style-type: none"> <li>- User stories</li> <li>- Use case diagrams, flow charts, state charts</li> </ul> Refinement of requirements <ul style="list-style-type: none"> <li>- Product Backlog Refinement</li> <li>- Backlog Grooming</li> <li>- Preparing the Sprint Planning</li> </ul> Quality Gates (3 phases product backlog: idea, requirement and specification)
Requirements engineering - estimate and prioritize requirements	30%	Estimations and Assessments in general <ul style="list-style-type: none"> <li>- Different methods (2-point &amp; 3-point estimation)</li> <li>- Estimations (Story Points, T-shirt sizes)</li> <li>- Planning poker</li> </ul> Errors in estimations (heuristics, cognitive distortions, countermeasures) Priorization after value, cost and risk Value-Risk-Matrix (Cohn) Kano Model for assessing value MOSCOW prioritization
Testing and release	5%	Procedure and rules of the Sprint review

