Create/sign into your Pearson VUE account, via which you can book and cancel your exams as well as access your score reports.

During/after Training (optional) or Self Preparation (use Recommend Study Materials below) schedule & pay (using a discount code if applicable) for your exam via your Pearson VUE account. Schedule at a secure test center or online with a reliable internet connection.

Once you pass your exam, immediately Claim and Share your Credly Digital Credentials (check your inbox and junk folder for an email from admin@credly.com) with your peers. Print a .pdf or hardcopy of your certificate.

If you fail your exam, Request A 30% Exam Retake Discount with an attached copy of your Pearson VUE score report.

Accommodations
For learning or physical disability exam accommodations, please contact certification@omg.org.

Cancellations/Refunds
An exam may be cancelled >24 hours prior to its scheduled date via Pearson VUE for a full refund or the exam price will be forfeited.

Duration
105 mins in native English-speaking countries. 135 mins in all others.
Note: Extra time confirmed following exam order completion.

Fee
US$350 + taxes (regional currency equivalent and taxes)

Format
Multiple choice (text and images)

Language
English. Use of translation apps during the exam is prohibited.

Passing Score
>=55/90 correct answers or >=61% correct answers

Prerequisites
Passing scores on SysML Model User and Model Builder Fundamental exams.

Technical Issues
Contact Pearson VUE Customer Service. Make sure to perform a System Test on your computer before scheduling an online exam.

Validity
Certifications expire 5 years after exam date. Take the same or higher level exam to extend certification validity.

Note: Extra time confirmed following exam order completion.
STANDARD COVERED

- System Modeling Language (SysML) v1.2

RECOMMENDED STUDY MATERIALS

- Systems Engineering with SysML/UML: Modeling, Analysis, Design (Weilkiens): Authors contributed to the standard.
- MBSE Practices in Telescope Modeling (Weilkiens)
- Cookbook for MBSE with SysML
- Survey of Model-Based Systems Engineering (MBSE) Methodologies (Estefan): Chapter 2 (Differentiating Methodologies from Processes, Methods, and Lifecycle Models)
- Systems Engineering Best Practices with the Rational Solution for Systems and Software Engineering (Hoffmann)
- The OMG SysML Tutorial
- Simulation-Based Design Using SysML: Part 1: A Parametrics Primer (Peak)
- Hybrid SUV Example (SysML v1.2)
- SysML Notations and Conventions

BUILDING A BEHAVIORAL MODEL USING THE FULL SET OF SYSML CONSTRUCTS

How To Use SysML to Model System Behavior
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Topic Description</th>
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| 29%        | **BUILDING A STRUCTURAL MODEL USING THE FULL SET OF SYSML CONSTRUCTS**  
Building the Block Definition Diagram: Adding Block Features: Receptions, ordered and unique collections, read only properties, property redefinition, constraint (reference to parametrics below), distributed properties. Block Relationships: Shared vs composite aggregation (white vs black diamond), association blocks and generalization sets. Value Types: Enumerations, structured value types ("position vector" with XYZ structure). Blocks and Behavior: Classifier behavior (See Friedenthal), owned behaviors, activity hierarchies on bdds. Defining instances.  
Building the Internal Block Diagram: Block Properties: Creating a property specific type and notation for part multiplicities on ibd’s. Ports: Flow Ports: Flow specifications and properties, conjugated ports, and compatibility rules including item flows and ports. Standard Ports: Defining required and provided interfaces, typing a port with required and provided interfaces (i.e., with a provided interface and with a classifier with use/realize relationship). Port delegation (for both flow ports and standard ports). Connectors: Nested connector ends, item flows/item properties, conveyed classifiers, typing item properties, ownership of item properties, and connector properties. |
| 11%        | **BUILDING A PARAMETRIC MODEL USING THE FULL SET OF SYSML CONSTRUCTS**  
How To Use Constraints in SysML to Model System Analyses: Defining Constraints on A Block Definition Diagram Using the Full SysML Feature Set: Nesting of constraints, trade study support (Annex E.4), measures of effectiveness, objective functions, alternatives, and constraining flows. |
| 10%        | **BUILDING A REQUIREMENTS MODEL USING THE FULL SET OF SYSML CONSTRUCTS**  
Building A Requirements Diagram Using the Full Set of SysML Constructs (5%): Specialized requirements (SysML Annex C: functional, interface, performance, physical and design constraints), establishing requirements traceability (derive, verify, satisfy, refine, trace and containment), tracing requirements in tables and matrixes, representing verification and testing, test context as well as test case.  
Building A Use Case Model Using the Full Set of SysML Constructs (5%): Relating use cases to behavioral models – activity diagrams and state machines, and relating use cases to requirements. |
| 6%         | **MODEL CONCEPTS**  
| 6%         | **ORGANIZING A SYSTEM MODEL USING THE FULL SET OF SYSML CONSTRUCTS**  
Building A Package Diagram Using the Full Set of SysML Constructs: Package and element import, defining and using view and viewpoint, building and using model libraries, as well as awareness of assessment criteria (e.g., structured queries) and activities. |
| 5%         | **DEFINING STEREOTYPES, PROPERTIES, AND CONSTRAINTS (EXTENSION, SUBCLASS)** |