
COVERAGE MAP FOR THE *OMG-CERTIFIED UML PROFESSIONAL FUNDAMENTAL EXAM*

(Based on OMG document ptc/03-08-02, released 15 August 2003)

Topic Area Allocation

Topic Area -->	Topic Area	Percent of test this topic should represent
	1.0 Class Diagrams (Basic)	30%
	2.0 Activity Diagrams (Basic)	20%
	3.0 Interaction Diagrams (Basic)	20%
	4.0 Use Case Diagrams (Basic)	20%
	5.0 Miscellaneous basic notions	10%
	Total	100%

Topic Area Details

Objectives and Topic Subareas (by Topic)

1.0 Class Diagrams (Basic)

Objective -->

1.1 Demonstrate the ability to understand the core modeling concepts of UML. Classes::Kernel

Topic Subarea-->

1 Root modeling concepts of UML diagrams (Sec 7.2)
2 Namespaces (Sec 7.3)
3 Multiplicities (Sec 7.4)
4 Expressions (Sec 7.5)
5 Constraints (Sec 7.6)
6 Instances (and Object Diagrams)(Sec 7.7)
7 Classifiers (includes Generalization) (Sec 7.8)
8 Features (Sec 7.9)
9 Operations (Sec 7.10)
10 Classes (Sec 7.11)
11 Data types (Sec 7.12)
12 Packages (and Package Diagrams)(Sec 7.13)

1.2 Verify the understanding of UML modeling dependency constructs. Classes::Dependencies (Sec. 7.14)

1 Dependency
2 Abstraction
3 Usage
4 Permission
5 Other Dependencies concepts

1.3 Confirm the ability to understand and represent operations that characterize the behavior of an element. Classes::Interfaces (Sec. 7.15)

1 Interface
2 Implementation

2.0 Activity Diagrams (Basic)

2.1 Verify the skills required to understand and represent models of traditional sequential flow charts in UML. Activities::BasicActivities (Fig. 175)

1 Nodes (basic only) (Fig. 176)
2 Flows (basic only) (Fig. 177)
3 Actions (basic only) (Fig. 178)
4 Control Nodes (Fig. 179)

3.0 Interaction Diagrams (Basic)

3.1 Demonstrate the basic knowledge and comprehension of the various Interaction Diagrams and their concepts. Interactions::Basic Interactions (Fig. 325)

1 Lifeline (Fig. 327)
2 Interaction (Fig. 326)
3 Messages (Fig. 328)
4 Other basic interaction concepts

4.0 Use Case Diagrams

4.1 Verify the skills required to understand and represent Use Case models. Use Cases (Chapter 16)

1 Use Case (Sec 16.3.6)
2 Actor (Sec. 16.3.1)
3 Extend and Include (Sec. 16.3.3–Sec. 16.3.5)
4 Classifier (of Use Case) (Sec. 16.3.2)
5 Other Use Case concepts

5.0 Miscellaneous basic notions

5.1 Recognize and understand UML primitive types Auxiliary Constructs::Primitive Types (Sec 17.4)

1 Primitive types

5.2 Confirm the basic knowledge of overall UML modeling notions. Other

1 Diagrams (App. A)

2 Stereotypes (basic only) (App. B)

3 Glossary (basic only) (Sec 4)

5.3 Confirm the basic knowledge of common behavior concepts Common Behaviors::Basic Behaviors (Chapter 13)

1 Common Behaviors::Basic Behaviors (Chapter 13)

COVERAGE MAP FOR THE *OMG-CERTIFIED UML PROFESSIONAL INTERMEDIATE EXAM*

Topic Area Allocation

Topic Area -->	Topic Area	Percent of test this topic should represent
	1.0 Composite Structure Diagrams (Intermediate)	15%
	2.0 Component Diagrams (Basic)	15%
	3.0 Action Models (Intermediate)	10%
	4.0 Activity Diagrams (Intermediate)	15%
	5.0 Interaction Diagrams (Intermediate)	15%
	6.0 State Machines (Behavioral)	15%
	7.0 Deployment Diagrams (basic, without Components)	5%
	8.0 Profiles	10%
	Total	100%

Topic Area Details

Objectives and Topic Subareas (by Topic)

1.0 Composite Structure Diagrams (Actions, Ports, and Structured Classes)

Objective -->	1.1 Demonstrate the ability to understand internal structures. Composite Structures:: Internal Structures (Fig. 95 and 96)
Topic Subarea-->	1 Structured classifier (Fig. 95)
	2 Connectors (Fig. 96)
	1.2 Verify the understanding of modeling ports. CompositeStructures::Ports (Fig. 97)
	1 Port (Fig. 97)
	2 Connector End (Fig. 97)

1.3 Verify the understanding of structure class. CompositeStructures::StructuredClasses (Fig. 98)
1 Class (from StructuredClasses, as specialized) (Fig. 98)

1.4 Verify the understanding of modeling invocations CompositeStructures::InvocationActions (Fig. 101)
1 Invocation Action (Fig. 101)
2 Trigger (Fig. 101)

2.0 Component Diagrams (Basic)

2.1 Confirm the ability to understand and represent basic components Components::BasicComponents (Fig. 77 and 78)
1 Component (without Packaging) (Sec. 8.3.1)
2 Connector (for components) (Sec. 8.3.2)
3 Realization (for components) (Sec. 8.3.3)
4 Other Basic Component concepts

3.0 Action Models (Intermediate)(Basic Actions in Activity Diagrams)

3.1 Demonstrate the intermediate knowledge and comprehension of the UML Action Language Actions::IntermediateAction (Fig. 142 to 149)
1 Invocation Actions (Fig. 142)
2 Apply Actions (Fig. 143)
3 Object Actions (Fig. 144)
4 Structured Feature Actions (Fig. 145)
5 Link Identification (Fig. 146)
6 Read Link Actions (Fig. 147)
7 Write Link Actions (Fig. 148)
8 Variable Actions (Fig. 149)
9 Other Intermediate Action concepts

4.0 Activity Diagrams (Intermediate)

4.1 Confirm the intermediate ability to understand and represent activity diagrams Activities::IntermediateActivities (Fig. 181 to 183)
1 Object Nodes (Fig. 181)
2 Controls (Fig. 182)
3 Partitions (Fig. 183)
4 Other Intermediate Activity concepts

4.2 Verify the skills required to understand and represent structure activities

Activities::StructuredActivities (Fig. 192 to 194)

- | |
|--------------------------------------|
| 1 Structured Activity Node |
| 2 Conditional Node |
| 3 Loop Node |
| 4 Other Structured Activity concepts |

5.0 Interaction Diagrams (Intermediate)

5.1 Demonstrate the knowledge and comprehension of using Interaction fragments

Interactions:Fragments (Fig. 329 to 331)

- | |
|---------------------------------------|
| 1 Combined Fragments (Fig. 329) |
| 2 Gates (Fig. 330) |
| 3 Interaction Occurrence (Fig. 8-331) |
| 4 Other Fragment concepts |

6.0 State Machine Diagrams (Behavioral)

6.1 Confirm the intermediate ability to understand and represent behavior state machines

StateMachines::BehaviorStateMachines (Fig. 354)

- | |
|---|
| 1 State and Finite State |
| 2 Pseudo State and Final State |
| 3 Transition |
| 4 Connection Point Reference |
| 5 State Machine |
| 6 Other Behavior State Machine concepts |

6.2 Recognize and understand the purpose of one-region state machines

StateMachines::MaximumOneRegion (Fig. 358)

- | |
|----------|
| 1 Region |
|----------|

7.0 Deployment Diagrams (basic, i.e., without Components)

7.1 Verify the basic understanding of modeling deployments Deployments::Artifacts (Fig. 124) and Nodes (Fig. 125 and 126)

- | |
|----------------------------|
| 1 Artifacts (Fig. 124) |
| 2 Nodes (Fig. 125 and 126) |

8.0 Profiles

8.1 Confirm the ability to understand and represent profiles Profiles (Chapter 18)

- | |
|-------------|
| 1 Profile |
| 2 Extension |

3 Stereotype and metaclass
4 Profile Application
5 Other Profile concepts

COVERAGE MAP FOR THE *OMG-CERTIFIED UML PROFESSIONAL ADVANCED EXAM*

Topic Area Allocation

Topic Area -->	Topic Area	Percent of test this topic should represent
	1.0 Class Diagrams (advanced)	5%
	2.0 Composite Structure Diagrams (advanced)	10%
	3.0 Component Diagrams (advanced)	5%
	4.0 Action modeling (advanced)	10%
	5.0 Activity Diagrams (advanced)	15%
	6.0 Deployment Diagrams (with Components)	15%
	7.0 State Machine Diagrams (Protocol state machines)	10%
	8.0 Miscellaneous Advanced Constructs	10%
	9.0 Language Architecture	10%
	10.0 Object Constraint Language	10%
	Total	100%

Topic Area Details

Objectives and Content Subareas (by Topic)

1.0 Class Diagrams (Advanced)

Objective -->	1.1 Verify the understanding of modeling of association classes Classes::AssociationClasses (Fig. 66)
Content subarea-->	Association class
	1.2 Confirm the ability to understand and represent power types Classes::PowerTypes (Fig. 68)
	Generalization set
	Power type

2.0 Composite Structure Diagrams (Advanced)

2.1 Demonstrate the basic knowledge and comprehension of collaborations CompositeStructures::Collaborations (Fig. 99 and 100)
Collaboration (Fig. 99)
Collaboration Occurrence (Fig. 100)

3.0 Component Diagrams (Advanced)

3.1 Demonstrate the basic knowledge and comprehension for packaging components Components::PackagingComponents (Fig. 79)
Component (for Packaging Components)

4.0 Actions Modeling (Advanced)

4.1 Demonstrate the basic knowledge and comprehension of advanced action language constructs. Actions::CompleteActions (Fig. 150 to 155)
Accept Event Actions (Fig. 150)
Object Actions (Fig. 151)
Link Identification (Fig. 152)
Read Link Actions (Fig. 153)
Write Link Actions (Fig. 154)
Raise Exception Action (Fig. 155)
Other Complete Component concepts

5.0 Activity Diagrams (Advanced)

5.1 Confirm the ability to understand and represent complete activity structures Activities::CompleteActivities (Fig. 184 - 191)
Elements (Fig. 184)
Constraints (Fig. 185)
Flows (Fig. 186)
Object Nodes (Fig. 187)
Data Stores (Fig. 188)
Parameter Sets (Fig. 189)
Control Nodes (Fig. 190)
Interruptible Regions (Fig. 191)
Other Complete Activity concepts

5.2 Confirm the ability to understand and represent structure nodes in activity diagrams Activities::CompleteStructuredActivities (Fig. 193)
Structured Nodes

5.3 Confirm the ability to understand and represent exceptions and expansion regions

Activities::ExtraStructuredActivities (Fig. 194 and 195)

Exceptions (Fig. 194)

Expansion Regions (Fig. 195)

6.0 Deployment Diagrams (with Components)

6.1 Verify the skills required to understand and represent deployment diagrams with components

Deployments::ComponentDeployments (Fig. 127)

Deployment

Deployment Specification

7.0 State Machine Diagrams (Protocol state machines)

7.1 Demonstrate the ability to understand and use protocol state machines

StateMachines::ProtocolStateMachines (Fig. 356 and 357)

Protocol State Machine (Fig. 356)

Constraints (In protocol state machine) (Fig. 357)

Other Protocol State Machine concepts

8.0 Miscellaneous Advanced Constructs

8.1 Verify the skills required to understand and represent Information Flow diagrams

AuxiliaryConstructs::InformationFlows (Fig. 413)

Information Item

Information Flow

8.2 Verify the skills required to understand and capture an abstracted view of a physical system

AuxiliaryConstructs::Models (Fig. 419)

Model

8.3 Verify the skills required to understand and represent templates AuxiliaryConstructs::Templates (Fig. 427)

Template

Template Parameters

9.0 Language Architecture

9.1 Confirm the basic knowledge of purpose and use of the UML language architecture (Infrastructure

submission document)
UML 2.0 Language Architecture
Infrastructure library
Relationship to other MDA standards
OCL within architecture
Diagram interchange

10.0 Object Constraint Language

10.1 Demonstrate the basic knowledge and comprehension of OCL OCL (submission document)
OCL Language Description (Pg. 2-1)
Abstract Syntax (Pg. 3-1)
Concrete Syntax (Pg. 4-1)
Semantics Described using UML (Page 5-1)
OCL Standard Library (Pg. 6-1)
Use of OCL Expressions in UML Models (Pg. 7-1)
Semantics Page (A-1)
Other OCL concepts