Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

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IBM Software Group

Mastering Object-Oriented Analysis and Design
with UML 2.0
Module 0: About This Course

Rational. software

Module 0 - About This Course

Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

Welcome the students. Encourage feedback and questions. The more the students get involved, the more successful they will be.

Hand out the sign-in sheet and registration form.

"Before we get started, I would like to discuss the course itself, for a moment, as well as some administrative details ...."

Introductions: instructor and students.

Get to know everyone. Find out:
• Their technical backgrounds (for example, software development and OO experience)
• What they do in their jobs
• What they are expecting from the course (for example, why they are here)
• How they plan to use the information they receive

Once you have identified the objectives, they can be used as guidelines to measure the effectiveness of the course throughout the week. Capture this on an easel page so you can hang it up and keep referencing it.

Introduce yourself. Hand out business cards.

Introductions

- ◆ Your organization
- ◆ Your role
- ◆ Your background, experience
    - ▪ Object technology experience
    - ▪ Software development experience
    - ▪ Implementation language experience
- ◆ Your expectations for this course

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Course Objectives

- ◆ Upon completion of the course, participants will be able to:
  - ▪ Apply an iterative, use case-driven, architecture-centric process to the development of a robust design model
  - ▪ Use the Unified Modeling Language (UML) to represent the design model
  - ▪ Apply Object-Oriented (OO) concepts: abstraction, encapsulation, inheritance, hierarchy, modularity, and polymorphism to the development of a robust design model

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During this course, you will be introduced to the concepts, process, and notation for developing a design model. You will be using the Rational Unified Process Analysis and Design workflow as your framework. These concepts can also be applied within any software development process.

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Course Objectives (continued)

- ◆ **Upon completion of the course, participants will be able to:**
  - ▪ Describe the different views of software architecture, key mechanisms that are defined in support of that architecture, and the effect of the architecture on the produced design
  - ▪ Define basic design considerations, including the use of patterns

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The concentration will be on those activities that are performed by the object-oriented designer. Architectural concepts will be introduced and discussed, as they drive the design, but this is not an architecture course.

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Instructor Notes:

This audience is as advertised in the OOAD data sheet.

An ideal student for this course is an OO developer who lacks the rigor of applying a formal process.

Warn the students that there is a lot of new material, but that you will be providing a roadmap. They should stay focused on the key points and not worry about the details.

It is *imperative* that the instructor review the OOAD Instructor Best Practices (IBP) document, since it provides lots of hints and guidelines on what to emphasize – subjects such as how to tailor content for an introductory audience.

Intended Audience

- ◆ Intended Audience
  - ▪ Practitioners who want a basic explanation of Object-Oriented Analysis and Design (OOAD) concepts, as well as hands-on practical experience in applying the techniques
  - ▪ Analysts, designers, software developers, and system engineers

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Module 0 - About This Course

Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

Prerequisites

- ◆ Some experience applying the following techniques in a software development environment
  - ▪ An exposure to object technology including, how to:
    - • Read a use-case model
    - • Add classes, objects, associations and how to create simple interaction and class diagrams
    - • Find classes and distribute class behavior
    - • Distinguish between the UML Analysis class stereotypes: boundary, control, and entity
  - ▪ Prerequisites can be achieved through attendance in "Essentials of Visual Modeling with UML" or equivalent experience

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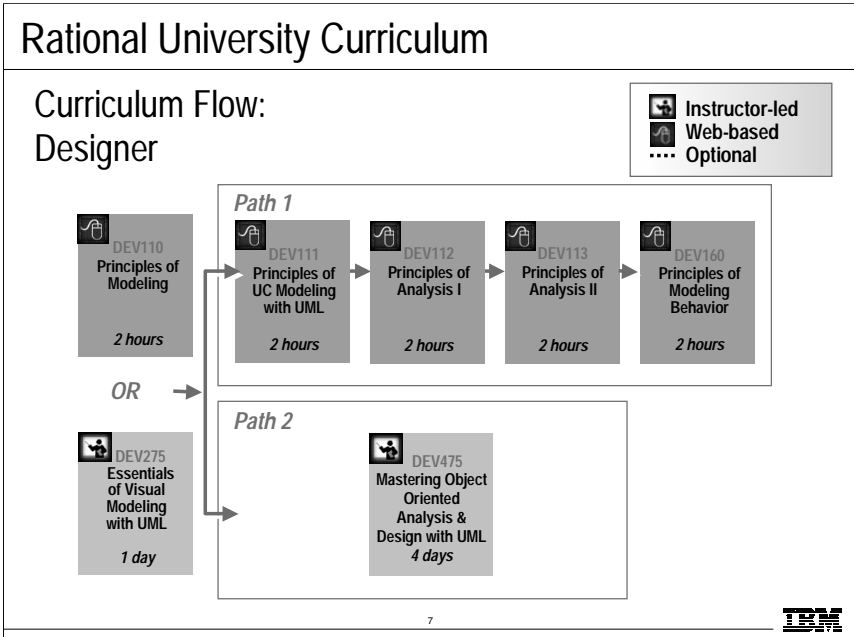
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Module 0 - About This Course

Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

This is an information slide. It gives you the opportunity to advertise other RU courses. Most students who are interested in OOAD are also interested in use cases (in the prior version of the OOAD course, use cases were included).
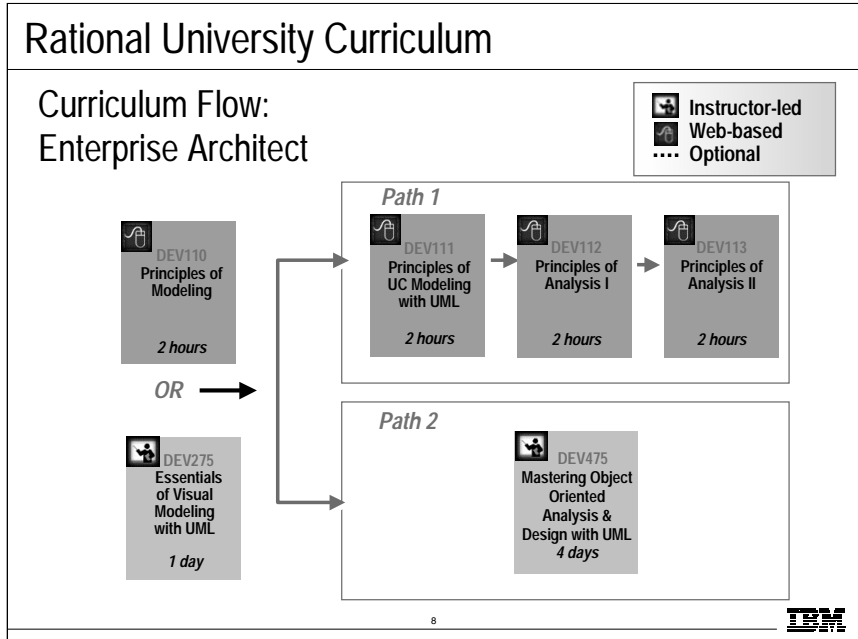
Also note that the paths provided are alternate paths they are not meant to indicate equivalence. The WBTs are available for students that may not be able to attend ILTs – but more material is covered in the ILTs.

Rational University Curriculum

Curriculum Flow: Designer

		Legend
		Instructor-led
		Web-based
		.... **Optional**

Path 1

| DEV110 Principles of Modeling 2 hours | → | DEV111 Principles of UC Modeling with UML 2 hours | → | DEV112 Principles of Analysis I 2 hours | → | DEV113 Principles of Analysis II 2 hours | → | DEV160 Principles of Modeling Behavior 2 hours |

OR →

Path 2

| DEV275 Essentials of Visual Modeling with UML 1 day | | DEV475 Mastering Object Oriented Analysis & Design with UML 4 days |

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The Rational University curriculum offers the courses shown here and on the next two slides. As you can see, for each major software development team role, Rational University offers a professional development course.
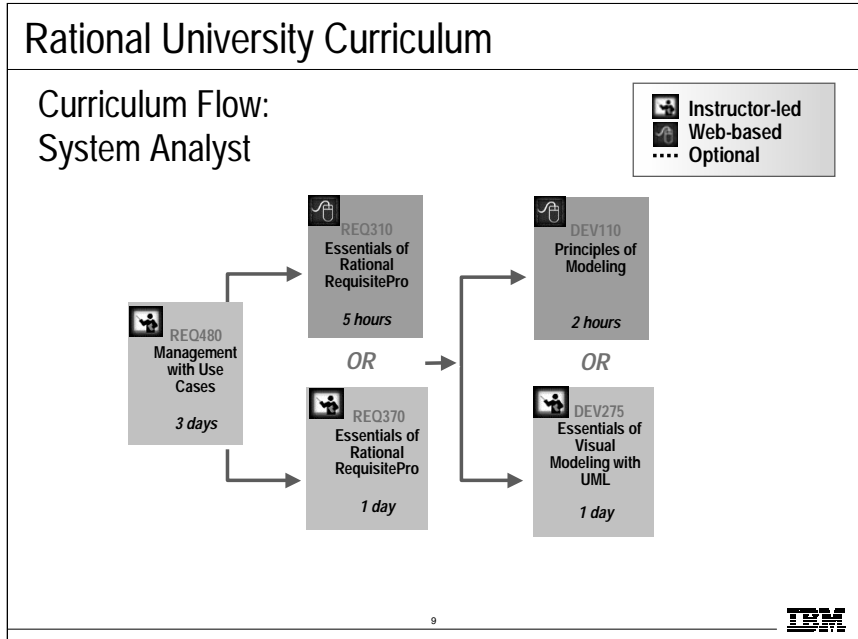
Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

Rational University Curriculum

Curriculum Flow:
Enterprise Architect

	Instructor-led
	Web-based
....	Optional

Path 1

DEV110		DEV111	DEV112	DEV113
Principles of Modeling		Principles of UC Modeling with UML	Principles of Analysis I	Principles of Analysis II
2 hours		*2 hours*	*2 hours*	*2 hours*

OR

Path 2

DEV275	DEV475
Essentials of Visual Modeling with UML	Mastering Object Oriented Analysis & Design with UML
1 day	*4 days*

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Instructor Notes:

Rational University Curriculum

Curriculum Flow:
System Analyst

Instructor-led
Web-based
•••• Optional

REQ310
**Essentials of
Rational
RequisitePro**

5 hours

DEV110
**Principles of
Modeling**

2 hours

REQ480
**Management
with Use
Cases**

3 days

OR

OR

REQ370
**Essentials of
Rational
RequisitePro**

1 day

DEV275
**Essentials of
Visual
Modeling with
UML**

1 day

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Module 0 - About This Course

Mastering OOAD w/ UML 2.0 – Instructor Notes

Instructor Notes:

This is where you tell the students about the material they have been provided for the course. Take the time to let them find the different books and understand what is contained in them and how they will be used.

Describe any supplementary material you may be providing.

Course Materials

◆ Student Manual, Books 1, 2, and 3
◆ Additional Information Appendix
◆ Exercise Workbook
◆ Payroll Exercise Solution

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The **Student Manual** contains copies of the slides, as well as detailed Student Notes.The Student Manual is comprised of three books.

The **Additional Information Appendix** contains a collection of additional topics that are not general enough to be included in the base course, or may be considered too advanced for the introductory audience. These topics may or may not be covered by the instructor. This appendix contains the *UML-To-Language Maps* that show the map from the UML to implementation language constructs for the following languages: C++, Java, PowerBuilder, and Visual Basic. It also contains information on several additional *Architectural Mechanisms*.

The **Exercise Workbook** is made up of three documents or handbooks. The requirements that drive the development of the example and exercise design models are documented in the **Exercise Workbook**: *Course Registration Requirements* and *Payroll Requirements*, respectively.

The architectural "givens" that guide the students in the development of the exercise design model are documented in the **Exercise Workbook**: *Payroll Architecture Handbook*.

The **Payroll Exercise Solution** contains the hard-copy of the course exercise solutions.

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Instructor Notes:

Other Sources of Information

Rational Unified Process

- http://www.ibm.com/developerworks/rational/products/rup
- ◆ Rational Web Site
  - http://www.ibm.com/software/rational/
- ◆ Rational developerWorks
  - http://www.ibm.com/developerworks/
- ◆ Rational Developer Domain
  - http://www.ibm.com/developerworks/rational/

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• The Rational Web site provides the latest information on new products, visual modeling and development, events, customer support, documentation and training, to name just a few.

• Rational developerWorks, a **customer-only** site is IBM's resource for developers.

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Instructor Notes:

Familiarize the students with the facility, if necessary.
• Restrooms
• Phones
• How people from the outside can reach them/leave messages
• Where they can connect to the Internet (where possible)

Discuss guidelines such as: what time class starts and ends each day; the number of breaks; length of breaks; and what time to break for lunch.

Logistics
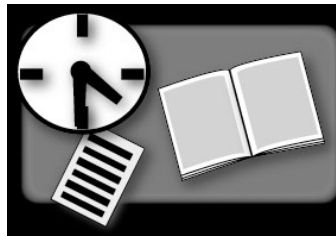
Morning
 2-Fifteen-minute breaks
Lunch
1 Hour
Afternoon
2-Fifteen-minute breaks

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