high tech institute

Object-oriented analysis and design – blended learning

Price: € 2,440 excl. VAT

Duration: 4 days virtual class + 8 hands-on supervision sessions

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Intro

Are you a Software developer, software engineer, project leader or a software manager who works in an environment where object-oriented software development is (or will be) applied?

In the online course, you will learn the typical OO approach for requirements analysis and the development of a complete analysis model in UML. Furthermore a sound understanding is obtained of the differences between - and importance of - system analysis and software design. In the classroom sessions you will learn by practicing, to understand the OO approach and its benefits.

The COVID-19 pandemic calls for a different approach in exchanging knowledge. That is why you can now attend this course online, by attending our virtual classroom with interactive e-learning assignments, and a supervised online self study and practice period.

Objective

Gain insight and knowledge of the typical OO approach for requirements analysis and the development of a complete analysis model in UML. Understand the OO approach and its benefits. In addition a sound understanding is acquired of the differences between - and importance of – system analysis and software design. In the supervised online self study and practice period, NF-requirements driven architecture will be practiced to a running case and organization specific architectural quality improvements.

Intended for

This course is intended for Software developers, software engineers, project leaders and software managers who work in an environment where object-oriented software development is (or will be) applied.

Certification

Participants will receive a digital High Tech Institute course certificate for attending this training.

Course leader

Dr. Onno van Roosmalen

Trainers

Martijn Ceelen MSc
Dr. Onno van Roosmalen

* Prices are subject to change. Price correction will be applied at the end of the year.

Methods

Action learning, lectures, assignments, discussions.

This program provides a theoretically sound foundation, turning it into practical action, using specific, real-world examples. As a result, you can apply what you've learned before the end of the course.

Our Virtual Classroom is an attractive alternative to a classroom environment. It provides an opportunity to learn and practice without being physically present at a local center. This option works like a face-to-face webinar where you are able to interact with your trainer and other students in a dynamic environment. In addition, the training offered through Canvas offers a large number of e-learning exercises that match your level and includes extras such as relevant articles and hands-on. All you need to participate in one of our Virtual Classrooms is a computer with internet access, integrated audio and webcam.

Limited group size ensures a positive and effective experience. This is why we offer this training for groups of up to twelve students.

You will always stay with the same trainers and the same group. This leads to a relaxed and friendly atmosphere and your trainer will be able to give you continuous feedback. You will be able to evaluate your work and track your progress.

Make your OO training convenient, engaging and more fun than you thought possible!

Program

The number of participants is limited to twelve, to make sure each person will receive full attention and enough opportunity for personal feedback and practice.

Preparation (LMS platform)

- Watch video introduction of the course.
- Do the entry test to establish where you stand.
- Make a description of a case study of your own. Best is to take something that you have (designed and) programmed before.

(Total preparation time less than 3 hours.)

Day 1 Virtual class

- Discussion of the questionnaire as preparation for the Intro.
- Theory: introduction on OO.
- Theory: Use Cases.
- Description of exercises Use Cases.
- Discussion solution.
- Theory: Class Diagrams.
- Virtual class assignment: Making a Class Diagram.
- Discussion Class Diagram assignment.

You will make the exercises in small groups in a break-out room in close contact with the trainer during the day.

Day 2 Virtual class

- Second class diagram assignment.
- Discussion of that assignment.
- Theory: Sequence diagrams.
- Virtual class room exercise on Sequences.
- Discussion solution.
- Theory: State Machine diagrams
- Virtual class room exercise: State Machines.

Intermediary period: in between day 2 and day 3, to make sure you were able to practice what you've learned so far, you will receive supervised self-study and hands-on assignments bi-weekly using the on-line learning management system:

- Self-study assignments using a manuscript that describes the analysis models of various case studies with detailed explanation of modeling decisions.
- Hands-on case study for which you will make an analysis model in several stages.
- Guided self-reflection on how you well you have performed the hands-on.

(Total time you need to spend in this period is 20 hours.)

Day 3 Virtual class

- Theory: Software Architecture.
- Virtual class assignment: Dealing separately with functional and nonfunctional requirements.
- Virtual class assignment: Definition and documentation of architectural decisions (tracing of requirements).
- Application on case study.
- Theory: Design Patterns
- Exercise: application to simple problems.

Day 4 Virtual class

- Theory: Architectural Patterns, layered architecture.
- Exercise: Develop layered architecture.
- Application to case studies.
- One hour theory. Different views: logical view, process view, component view, deployment view.
- Exercise process view.
- Theory: Completion.

Finalization period
Several weeks after day 4, to make sure you were able to practice what you've learned so far, you will receive supervised self-study and hands-on assignments bi-weekly using the on-line learning management system:

- Self-study assignments using a manuscript that describes the design models of various case studies with detailed explanation of modeling decisions.
- Hands-on case study for which you will make a design model in several stages.
- Guided self-reflection on how you well you have performed the hands-on.

(Total time you need to spend during this period is 20 hours.)

You will have access to the e-learning platform for a total period of 6 more months, asking questions to the trainers and submit experiences.

Trainers

Martijn Ceelen MSc
Dr. Onno van Roosmalen