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Course : Analysis and ergonomics of software GUIs

Practical course - 2d - 14h00 - Ref. AIL
Price : 1540 CHF E.T.

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Whether it's a screen directly integrated into a machine, a computer screen, a touch-sensitive tablet or a smartphone, the purpose of an interface is to interact with the user and meet his or her needs. To discover these needs and the role of the ergonomist, this training course will introduce you to user-centered interface design methods, and introduce you to the ergonomic principles essential for designing and auditing an HMI.

Teaching objectives

At the end of the training, the participant will be able to:

- Understand the purpose and principles of software ergonomics
- Discover ergonomics standards and rules in various fields
- Critically analyze an interface and make recommendations to improve usability
- Model application user profiles
- Create the design and dynamics of a user interface

Intended audience

Anyone in the IT field directly or indirectly concerned with the quality of human-machine interfaces.

Prerequisites

No special knowledge required.

Course schedule

1 Introduction: what is ergonomics?

- Definition of ergonomics.
- Why do we need ergonomists?
- The role of ergonomics. Ergonomics and innovation.
- ISO 9241 usability standards.
- UX Design and "User experience". UX components.
- Usability.
- Emotional design.

PARTICIPANTS

Anyone in the IT field directly or indirectly concerned with the quality of human-machine interfaces.

PREREQUISITES

No special knowledge required.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Ergonomics in the development cycle

- The V-design cycle.
- Types of intervention, design or correction.
- The ROI of ergonomics.
- In-depth ergonomics. Design and structuring.
- Overview of different ergonomics methods.
- Ergonomics in the context of Agile and iterative methods.

Role-playing

Familiarization with ergonomics. Observation and identification of areas for improvement based on concrete examples.

3 UCD User-centered design, modeling users

- Personas.
- Task analysis.
- Modeling tools. Mind Mapping (XMind).
- Interviews with users. Validating a content structure: card sorting.
- Mock-up: When to make an HMI mock-up? Vertical and horizontal mock-ups.
- Low-, medium- and high-fidelity models: market tools.

Hands-on work

Conception de personas. Modéliser les tâches et structurer les éléments de l'interface.

4 Understanding people to create an HMI

- Human cognitive functioning: visual perception and comprehension. Attentional resources.
- Levels of business expertise.
- Basic principles of good UX: time management, affordance and mapping concepts, Gestalt laws.
- The colors. Use of images and icons.
- Context: environment, mobility, modes of interaction and guidelines.
- Menus, Widgets and Shortcuts.
- Man-machine dialogue: Grice's principles, Nielsen's maxims.

Hands-on work

Observe interfaces, identify areas for improvement. Mock-up an interface.

5 Evaluation: expert analysis/softwareheuristics

- Expert analysis methodology based on heuristics.
- The different categories of HMI analysis criteria (control, User Experience, error management, help...).
- Review of criteria using examples.

Hands-on work

HMI audit: application of proposed analysis grids. Recommendations for improving ergonomics.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

Dates and locations

REMOTE CLASS
2026 : 4 June, 17 Sep., 10 Dec.